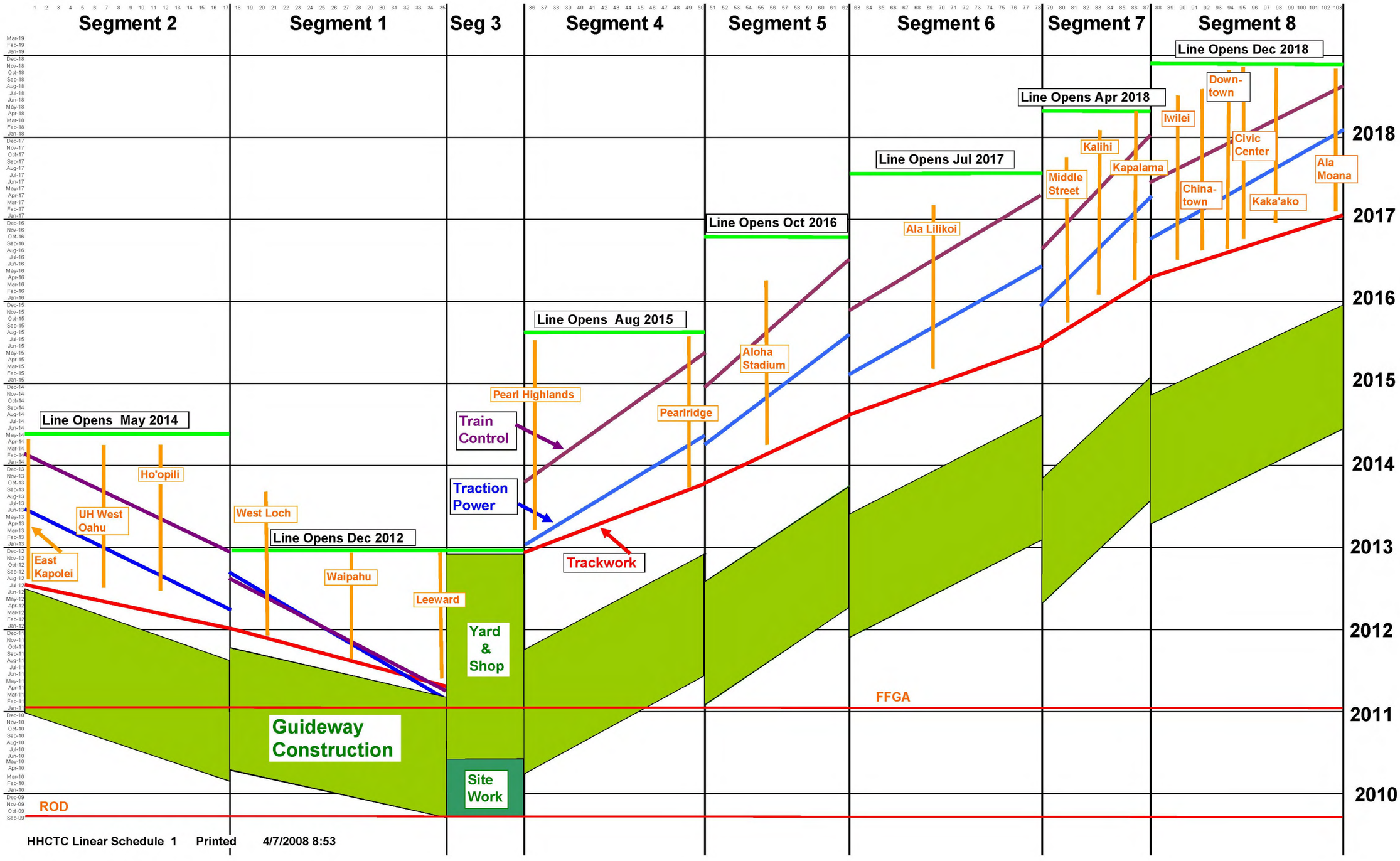

Segment 2
Segment 1
Seg 3
Segment 4
Segment 5
Segment 6
Segment 7
Segment 8
Line Opens Dec 2018
Line Opens Apr 2018
Line Opens Jul 2017
Line Opens Oct 2016
Line Opens Aug 2015
Line Opens May 2014
Line Opens Dec 2012
Down-town
Iwilei
Civic Center
Kalihi
Kapalama
Middle Street
China-town
Kaka'ako
Ala Moana
Ala Lilikoi
Aloha Stadium
Pearl Highlands
Pearlridge
Train Control
Traction Power
Trackwork
Ho'opili
UH West Oahu
East Kapolei
West Loch
Waipahu
Leeward
Yard & Shop
Site Work
Guideway Construction
FFGA
ROD
2018
2017
2016
2015
2014
2013
2012
2011
2010
HHCTC Linear Schedule 1 Printed 4/7/2008 8:53

AR00076288

Utility Relocation

Key Players:

- RTD—Harvey Berliner
- GEC Team:
  - Art Borst, Civil Facilities Design Lead
  - Jimmy Yamamoto, Utilities Design Lead
- GEC Subconsultant:
  - RMTC, Inc.

Utility Mapping

- Public Utilities
  - Water
  - Sewer
- Private Pipeline Utilities
  - Gasco
  - Tesoro
  - Chevron
- HECO
- Hawaiian Telecom
- Military Communications

Third Party Agencies

- HDOT
  - Director's Office
  - Highways Division
    - Structures
    - Traffic
    - Design
    - Planning
  - Airports Division
  - Harbors Division
- Aloha Stadium
- US Military
- Honolulu Department of Planning and Permitting
- Honolulu Department of Design and Construction

Safety and Security Oversight and Review Committee

- Honolulu Fire Department
- Honolulu Police Department
- Honolulu Department of Emergency Management
- Honolulu Emergency Services Department
- Honolulu Department of Transportation Services
- Honolulu Rapid Transit Division
- Transportation Security Administration
- HHCTP General Engineering Consultant

DTS- Department of Transportation Services
RTD- Rapid Transit Division of DTS
PMC-Program Management Support Consultant
GEC-General Engineering Consultant

FT- Full Time Position
PT- Part Time Position

* The person identified is filling this position on a temporary basis until recruitments are finalized.

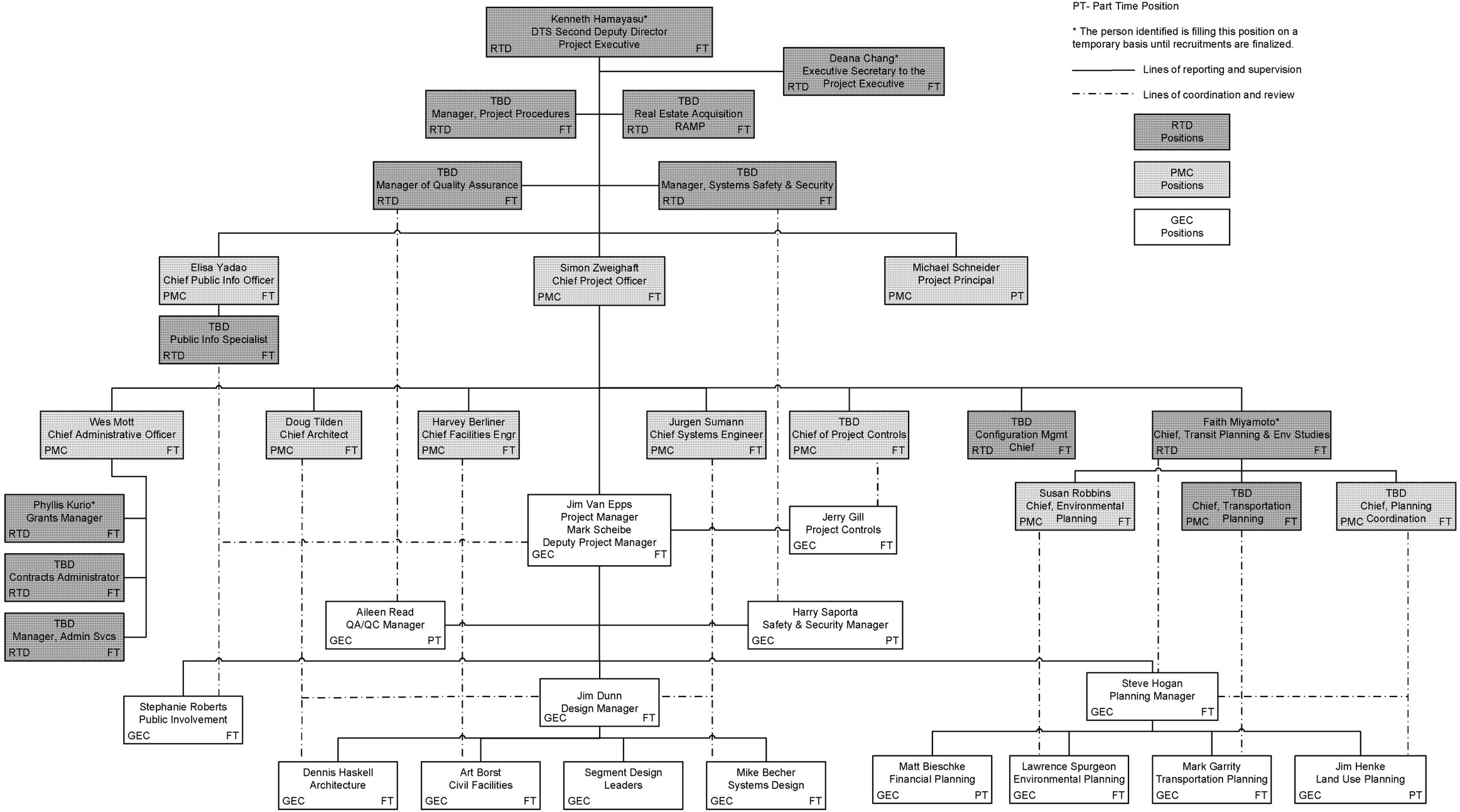
——— Lines of reporting and supervision

– · – · – · – Lines of coordination and review

RTD Positions

PMC Positions

GEC Positions

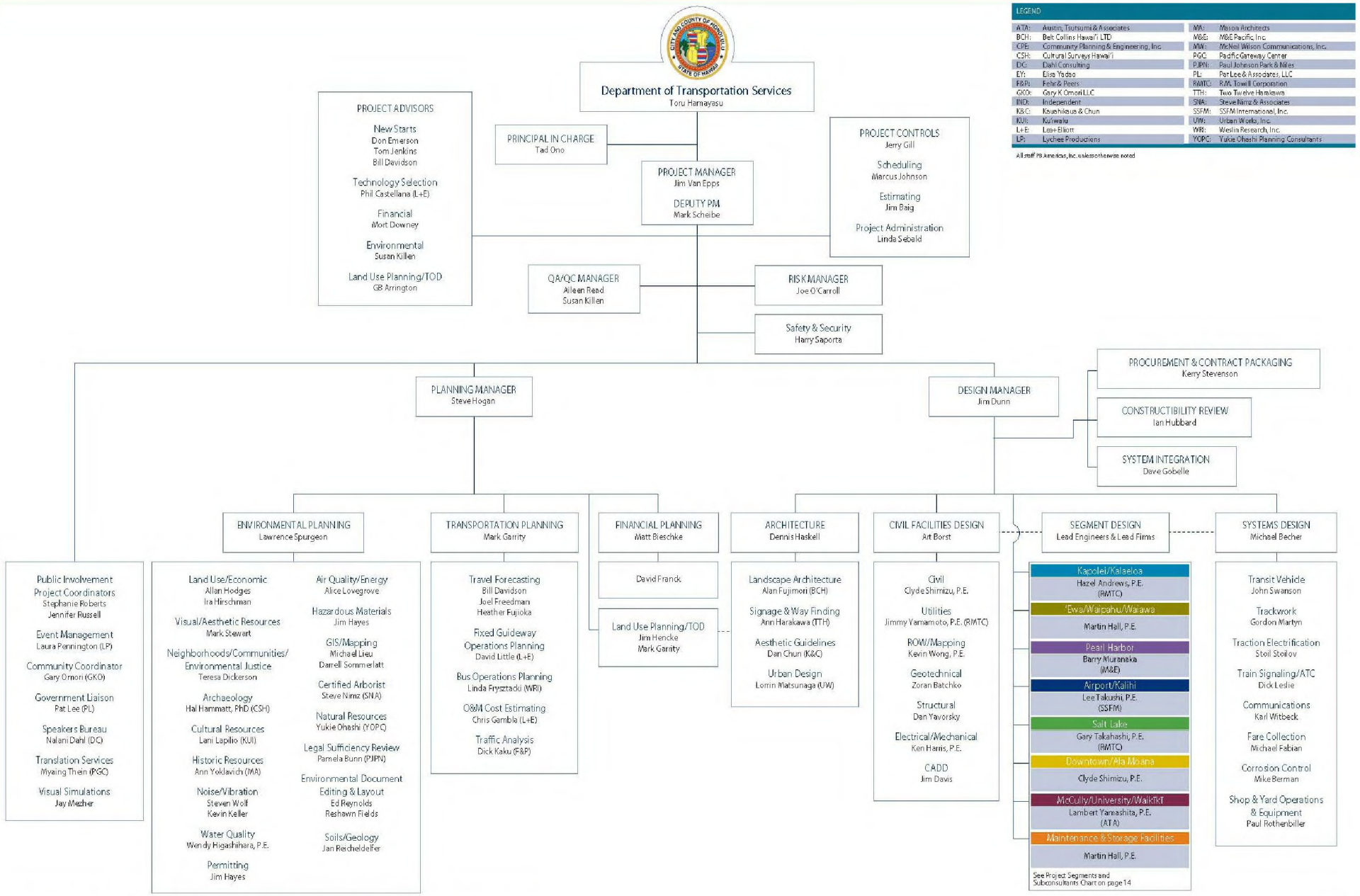


Federal Transit Administration

Project Management Oversight Meeting

General Engineering Consultant

April 8, 2008


LEGEND
ATA: Austin, Tsutsumi & Associates
BCH: Belt Collins Hawai'i LTD
CDE: Community Planning & Engineering, Inc.
CSH: Cultural Surveys Hawai'i
DC: Dahl Consulting
EY: Elisa Yadao
F&P: Fehr & Peers
GKO: Gary K Omori LLC
IND: Independent
K&C: Kaushikaua & Chun
KUI: Kuiwalu
L+E: Lea+Elliott
LP: Lychee Productions
MA: Mason Architects
M&E: M&E Pacific, Inc.
MW: McNair Wilson Communications, Inc.
PGC: Pacific Gateway Center
PJPN: Paul Johnson Park & Niles
PL: Pat Lee & Associates, LLC
RMTC: R.M. Towill Corporation
TTH: Two Twelve Hanakawa
SNA: Steve Nimz & Associates
SSFM: SSFM International, Inc.
UW: Urban Works, Inc.
WR: Westin Research, Inc.
YOPC: Yukie Ohashi Planning Consultants
All staff PB Americas, Inc. unless otherwise noted
Department of Transportation Services
Toru Hamayasu
PROJECT ADVISORS
New Starts
Don Emerson
Tom Jenkins
Bill Davidson
Technology Selection
Phil Castellana (L+E)
Financial
Mort Downey
Environmental
Susan Killen
Land Use Planning/TOD
GB Arrington
PRINCIPAL IN CHARGE
Tad Ono
PROJECT MANAGER
Jim Van Epps
DEPUTY PM
Mark Scheibe
PROJECT CONTROLS
Jerry Gill
Scheduling
Marcus Johnson
Estimating
Jim Baig
Project Administration
Linda Sebald
QA/QC MANAGER
Aileen Read
Susan Killen
RISK MANAGER
Joe O'Carroll
Safety & Security
Harry Saporta
PLANNING MANAGER
Steve Hogan
DESIGN MANAGER
Jim Dunn
PROCUREMENT & CONTRACT PACKAGING
Kerry Stevenson
CONSTRUCTIBILITY REVIEW
Ian Hubbard
SYSTEM INTEGRATION
Dave Gobelle
ENVIRONMENTAL PLANNING
Lawrence Spurgeon
TRANSPORTATION PLANNING
Mark Garrity
FINANCIAL PLANNING
Matt Bieschke
ARCHITECTURE
Dennis Haskell
CIVIL FACILITIES DESIGN
Art Borst
SEGMENT DESIGN
Lead Engineers & Lead Firms
SYSTEMS DESIGN
Michael Becher
Public Involvement
Project Coordinators
Stephanie Roberts
Jennifer Russell
Event Management
Laura Pennington (LP)
Community Coordinator
Gary Omori (GKO)
Government Liaison
Pat Lee (PL)
Speakers Bureau
Nalani Dahl (DC)
Translation Services
Myaing Thein (PGC)
Visual Simulations
Jay Mezher
Land Use/Economic
Allan Hodges
Ira Hirschman
Visual/Aesthetic Resources
Mark Stewart
Neighborhoods/Communities/ Environmental Justice
Teresa Dickerson
Archaeology
Hal Hammatt, PhD (CSH)
Cultural Resources
Lani Lapilio (KUI)
Historic Resources
Ann Yoklavich (MA)
Noise/Vibration
Steven Wolf
Kevin Keller
Water Quality
Wendy Higashihara, P.E.
Permitting
Jim Hayes
Air Quality/Energy
Alice Lovegrove
Hazardous Materials
Jim Hayes
GIS/Mapping
Michael Lieu
Darrell Sommerlatt
Certified Arborist
Steve Nimz (SNA)
Natural Resources
Yukie Ohashi (YOPC)
Legal Sufficiency Review
Pamela Bunn (PJPN)
Environmental Document Editing & Layout
Ed Reynolds
Reshawn Fields
Soils/Geology
Jan Reicheldelfer
Travel Forecasting
Bill Davidson
Joel Freedman
Heather Fujioka
Fixed Guideway Operations Planning
David Little (L+E)
Bus Operations Planning
Linda Frysztacki (WRI)
O&M Cost Estimating
Chris Gambla (L+E)
Traffic Analysis
Dick Kaku (F&P)
David Franck
Land Use Planning/TOD
Jim Hencke
Mark Garrity
Landscape Architecture
Alan Fujimori (BCH)
Signage & Way Finding
Ann Harakawa (TTH)
Aesthetic Guidelines
Dan Chun (K&C)
Urban Design
Lorrin Matsunaga (UW)
Civil
Clyde Shimizu, P.E.
Utilities
Jimmy Yamamoto, P.E. (RMTC)
ROW//Mapping
Kevin Wong, P.E.
Geotechnical
Zoran Batchko
Structural
Dan Yavorsky
Electrical/Mechanical
Ken Harris, P.E.
CADD
Jim Davis
Kapolei/Kalaeloa
Hazel Andrews, P.E. (RMTC)
'Ewa/Waipahu/Waiawa
Martin Hall, P.E.
Pearl Harbor
Barry Muranaka (M&E)
Airport/Kalihi
Lee Takushi, P.E. (SSFM)
Salt Lake
Gary Takahashi, P.E. (RMTC)
Downtown/Ala Moana
Clyde Shimizu, P.E.
McCully/University/WalkTkT
Lambert Yamashita, P.E. (ATA)
Maintenance & Storage Facilities
Martin Hall, P.E.
See Project Segments and Subconsultants Chart on page 14
Transit Vehicle
John Swanson
Trackwork
Gordon Martyn
Traction Electrification
Stoil Stoilov
Train Signaling/ATC
Dick Leslie
Communications
Karl Witbeck
Fare Collection
Michael Fabian
Corrosion Control
Mike Berman
Shop & Yard Operations & Equipment
Paul Rothenbiller

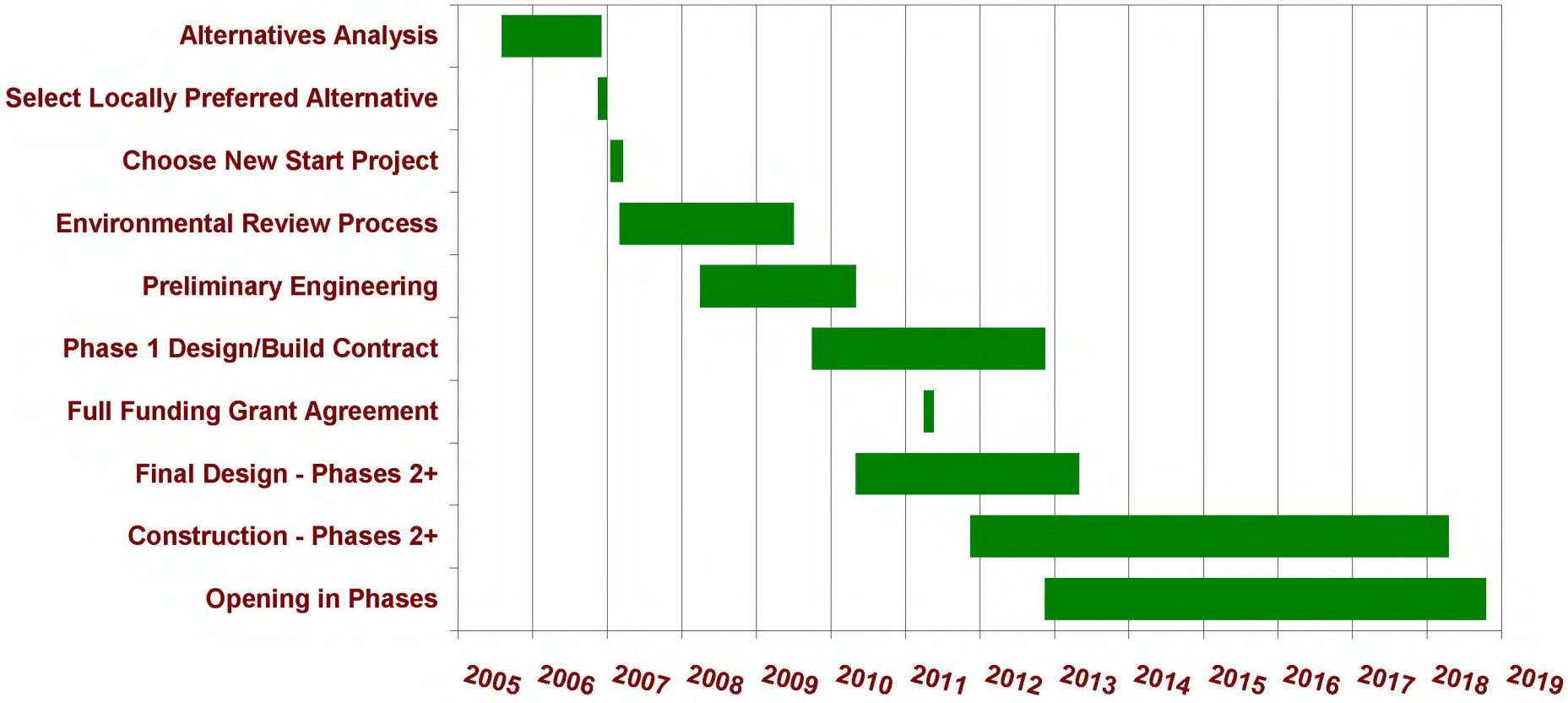

WAIPAHU
LEAD: PB
Martin Hall, P.E.
Lyon Associates inc
MK Engineers
Sato & Associates Inc
PEARL CITY
LEAD: M&E Pacific Inc
Barry Muranaka, P.E.
Nakamura Oyama & Associates Inc
Kober/Hanssen/Mitchell Architects
'AIEA
PEARL HARBOR
LEAD: PB
Martin Hall, P.E.
R.M. Towill Corporation
Group 70 International Inc
Sato & Associates Inc
LEAD: R.M. Towill Corporation
Gary Takahashi, P.E.
ECS Inc
KAI Hawaii Inc
SALT LAKE
'EWA
KAPOLEI
HICKAM
AIRPORT
KALIHI
LEAD: PB
Clyde Shimizu, P.E.
R.M. Towill Corporation
Urban Works Inc
'EWA BEACH
LEAD: SSFM International Inc
Lee Takushi, P.E.
KYA Design Group
AM Partners Inc
Ronald N S Ho & Associates Inc
DOWNTOWN
UNIVERSITY
LEAD: R.M. Towill Corporation
Hazel Andrews, P.E.
Belt Collins Hawaii Ltd
Group 70 International Inc
KAKA'AKO
WAIKIKI
LEAD: Austin, Tsutsumi & Associates Inc
Lambert Yamashita, P.E.
Earth Tech Inc
Group 70 International Inc
DIAMOND
HEAD

Project Activities

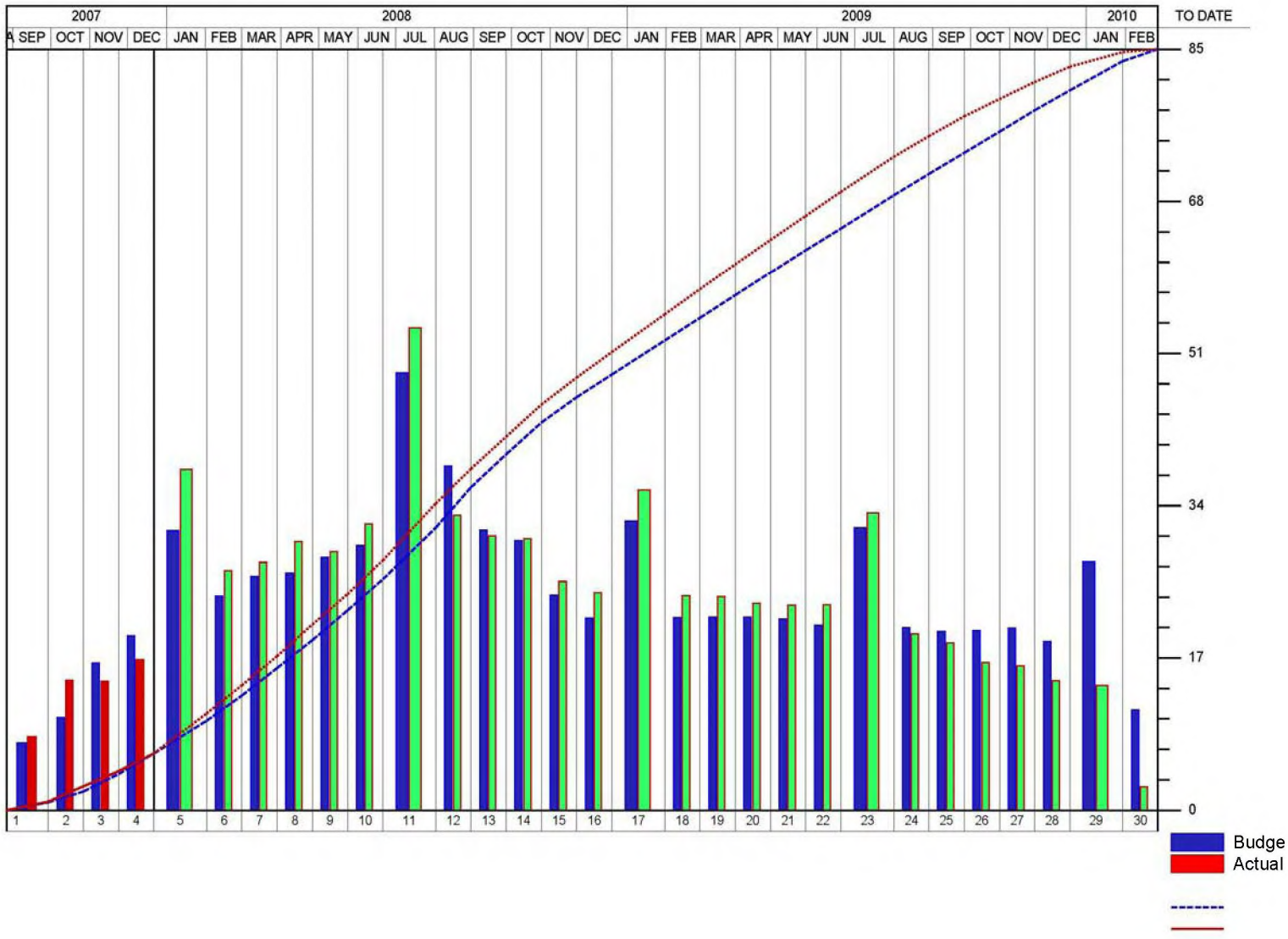
Workshops

- Environmental - October 1 - 4, 2007
- Structural and Geotechnical – January 7 – 10, 2008
- Station Area Interface - January 14 - 18, 2008
- Structural – January 21 – 25, 2008
- Architectural - February 7 - 8, 2008
- Contractors' Forum - March 20 - 21, 2008
- Systems Engineering - March 10 - 14, 2008
- EIS Document Review – May 14 – 20, 2008

Honolulu High-Capacity Transit Corridor Project Schedule



Project Budget vs. Actual Costs



Alignment and Guideway Structure Update

Alignment and Guideway Structure Update

Team Focus:

- Refined the alignment and profile in support of the environmental impact analysis
- Developed conceptual station plans to identify site specific interface requirements
- Initiated coordination discussions with federal, state and city/county cooperating agencies
- Invited industry participation to comment upon design and construction options under consideration

Alignment - Update

- Froze the alignment to allow environmental staff to finalize impact analysis and address potential mitigation measures
- Identified ROW requirements for the guideway, stations, station touchdowns, and ancillary facilities
- Developed streetscape impacts along the corridor- including lane channelization, intersection movements, and pedestrian/bicycle access

Alignment Update

- Developed conceptual geometric layouts for the future extension to the airport
- Developed “single track” option for the UH-Manoa and Waikiki Branches
- Identified mid-route storage track and crossovers for operational analysis

Guideway Update

Team Focus:

- Shortlisted the structural options for the guideway which combines efficient design with architectural judgment
  - Structural Workshop
  - Contractors' Forum
- Conceptual engineering
  - Girder dimensions
  - Span lengths

Guideway Update

- Identified special long span options for crossing H1 and major surface intersections
- Developed substructure options for specific locations where standard concentric column bents are not practical
- Commenced conceptual engineering for station framing and special trackwork spans

Summary

- Significant progress in defining alignment, streetscape and traffic impacts, ROW needs, and station configurations
- Structural analysis, combined with industry input, will lead to an efficient and architecturally acceptable guideway design
- Federal and state agencies are actively involved and contributing valuable input
- Key engineering/architectural milestones are on schedule in support of the EIS and preliminary design

EIS/Planning Update

EIS Alternatives

- No Build Alternative
- Fixed Guideway Transit Alternative via Salt Lake Boulevard
- Fixed Guideway Transit Alternative Serving the Airport
- Fixed Guideway Transit Alternative Serving the Airport and Salt Lake

Project Phasing

- Full Project would provide a fixed guideway transit system between Kapolei and UH Mānoa with a branch line to Waikīkī.
- First Project from UH West O‘ahu to Ala Moana Center can be constructed with anticipated funding.
- Multiple construction phases and phased revenue service for First Project between 2009 start of construction and 2018 completion of construction.

EIS Process

Activity	Schedule
EIS Preparation	Ongoing
EIS Chapter Review by RTD	Ongoing
Complete First Administrative Draft	May 12, 2008
EIS Review Workshop	May 14-20, 2008
Legal Sufficiency Review	June 10 - 24, 2008
Administrative Draft EIS to FTA	July 7, 2008
Notification of Availability	September 29, 2008

Travel Forecasting

- Travel forecasting model updated in response to comments from February 14 FTA meeting
- Updated model used to prepare DEIS forecasts
- Follow-up meeting with FTA travel forecasting staff to be scheduled for early May

East Kapolei to Ala Moana Center Fixed Guideway Project – Initial Travel Forecasting Results

DRAFT

- 2030 Fixed Guideway Daily Boardings ~ 90,000
- 2030 Average Weekday "New" Riders ~ 32,000
- Cost-Effectiveness Index ~ $21.70

DRAFT

Guideway Design Activities

Art Borst, GEC

Jan 7-10 2008 Structural /Geotechnical Workshop Recommendations

- Held Industry Review/Contractor Forum in March
- Continued Evaluation of “Shortlisted” Guideway Superstructure Configurations
- Began Locating Piers and Configuring Roadways to Minimize Need for Special Bents
- Re-Evaluated Need for Additional Geotechnical Explorations

Industry Review/Contractor Forum March 20/21, 2008

- Invited Major Segmental Concrete Transit Guideway Contractors
  - Deal/Rizzani De Eccher USA
  - Dick Pacific Construction Co.
  - Hawaiian Dredging Construction Co.
  - Kiewit Pacific
  - PCL Civil Constructors
  - SNC Lavalin

Industry Review/Contractor Forum March 20/21, 2008

- Briefed them on Project Specifics, Risk, Bonding and Insurance Issues
- Toured the Alignment
- Discussed Constructability, Contract Packaging, Risk and Procurement
- In both Open and Private Sessions
- Currently Preparing a Summary Report

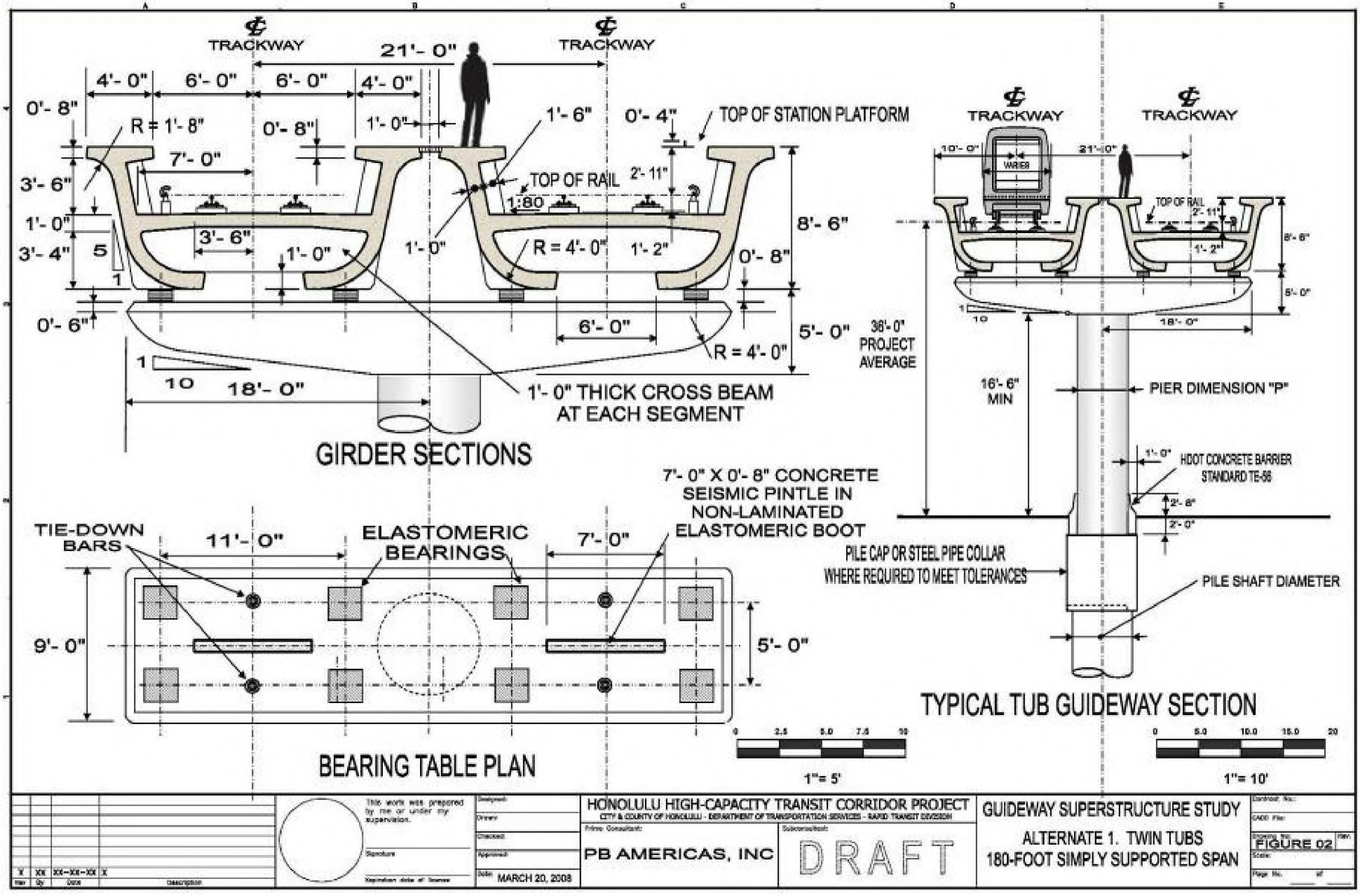
Industry Review/Contractor Forum Issues & Concerns

- Limit Number of Shortlisted Firms for Contracts
- Decide on Best Value or Low Bid Selection
- Define the Guideway Configuration given the Time Constraints of the Schedule
- Provide 4 to 6 Months for Proposal Prep
- Be Clear on MOT Requirements
- Provide Sufficient Work Space (Min. 40 ft.)
- Schedule is Ambitious – Allow for 2 – 10hr shifts
- Package First 6 miles as One Contract

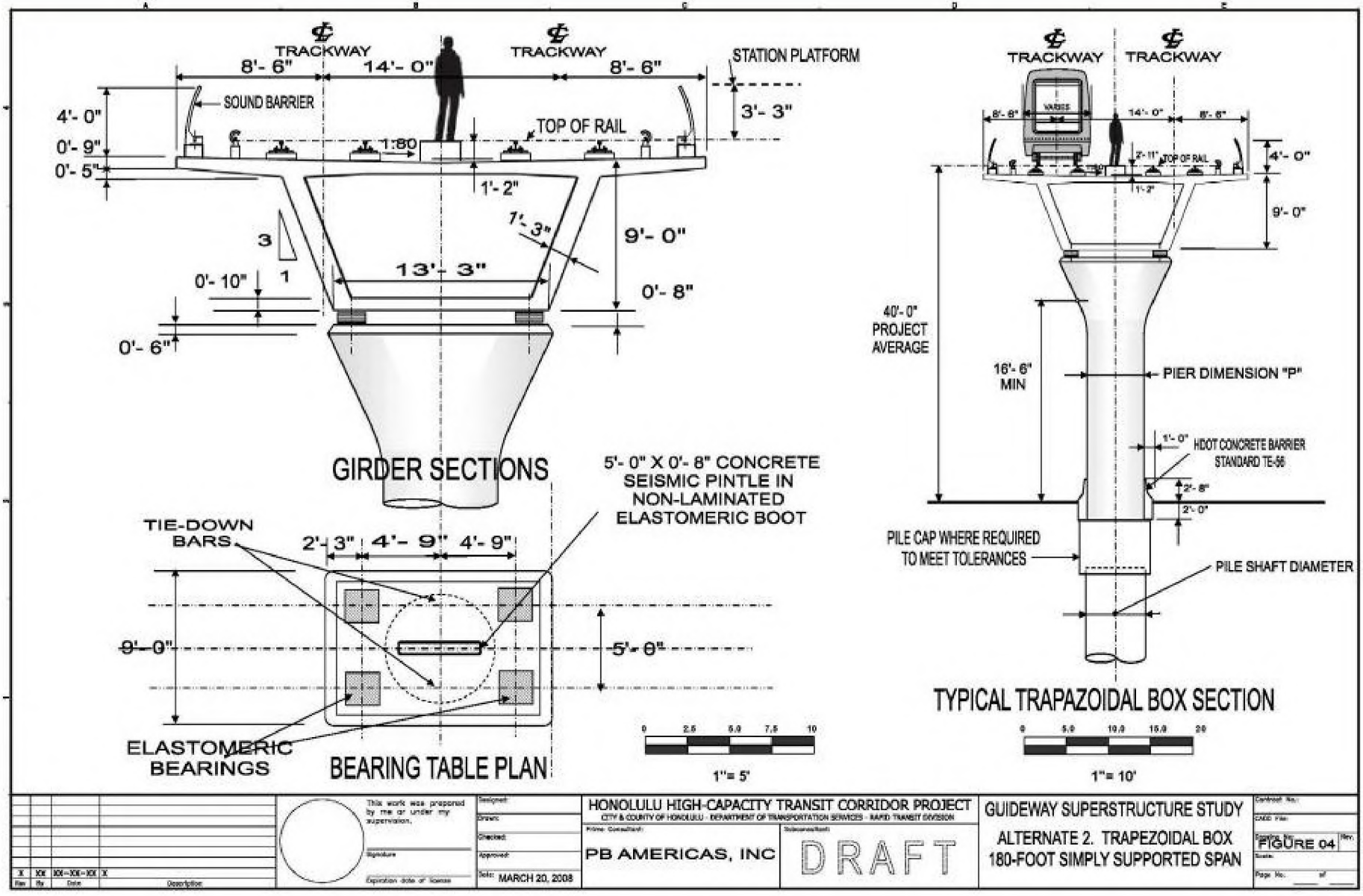
Guideway Alternatives Evaluation

- Four Guideway Superstructure Configurations
  - Trapezoidal Box
  - Twin Track “Single U-Section”
  - Two Single Track “Twin U-Sections”
  - “Finback” Box Girder
- Varying Span Lengths
  - 120 ft to 180 ft.

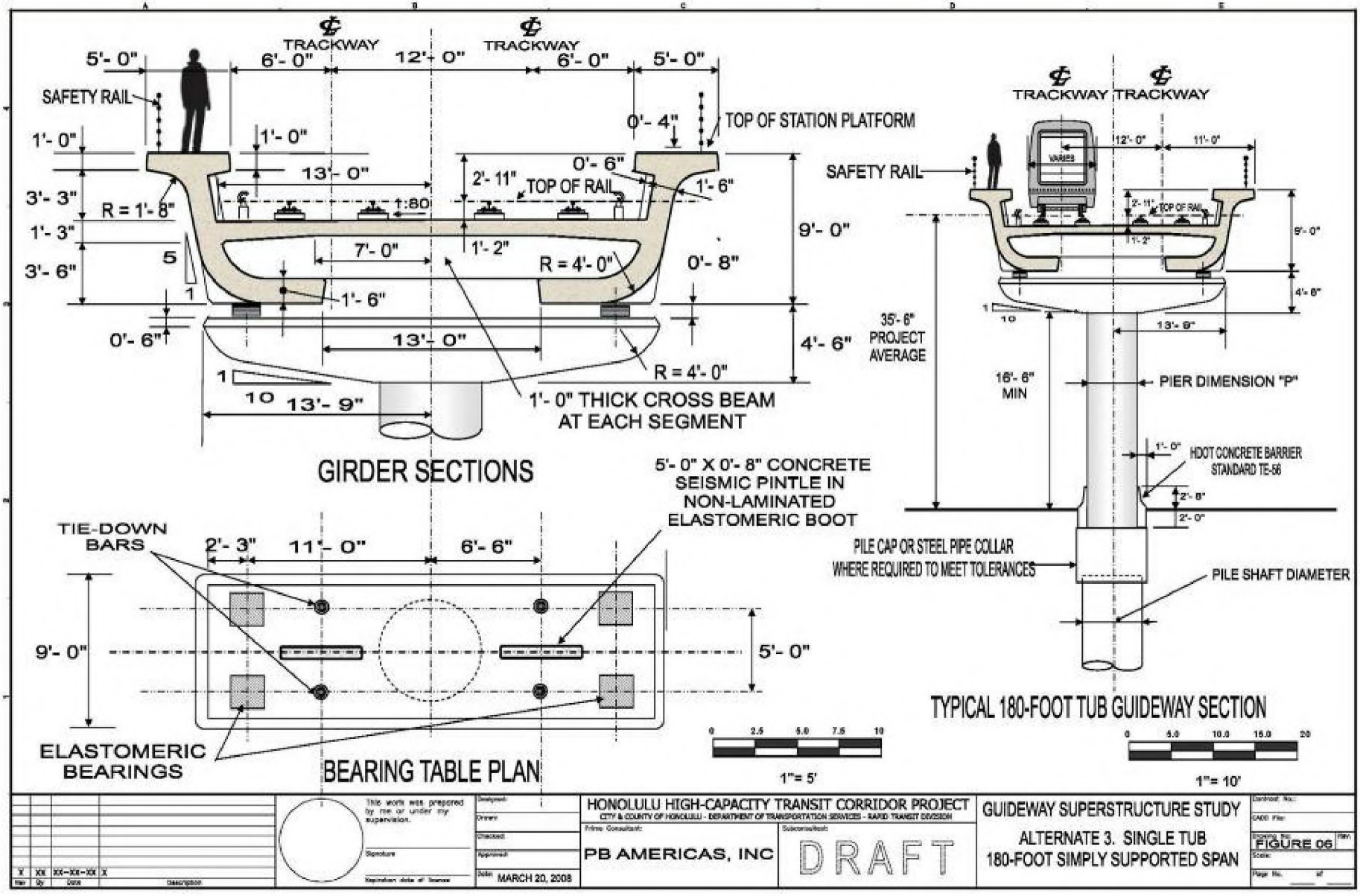
Two Single Track Twin Tubs



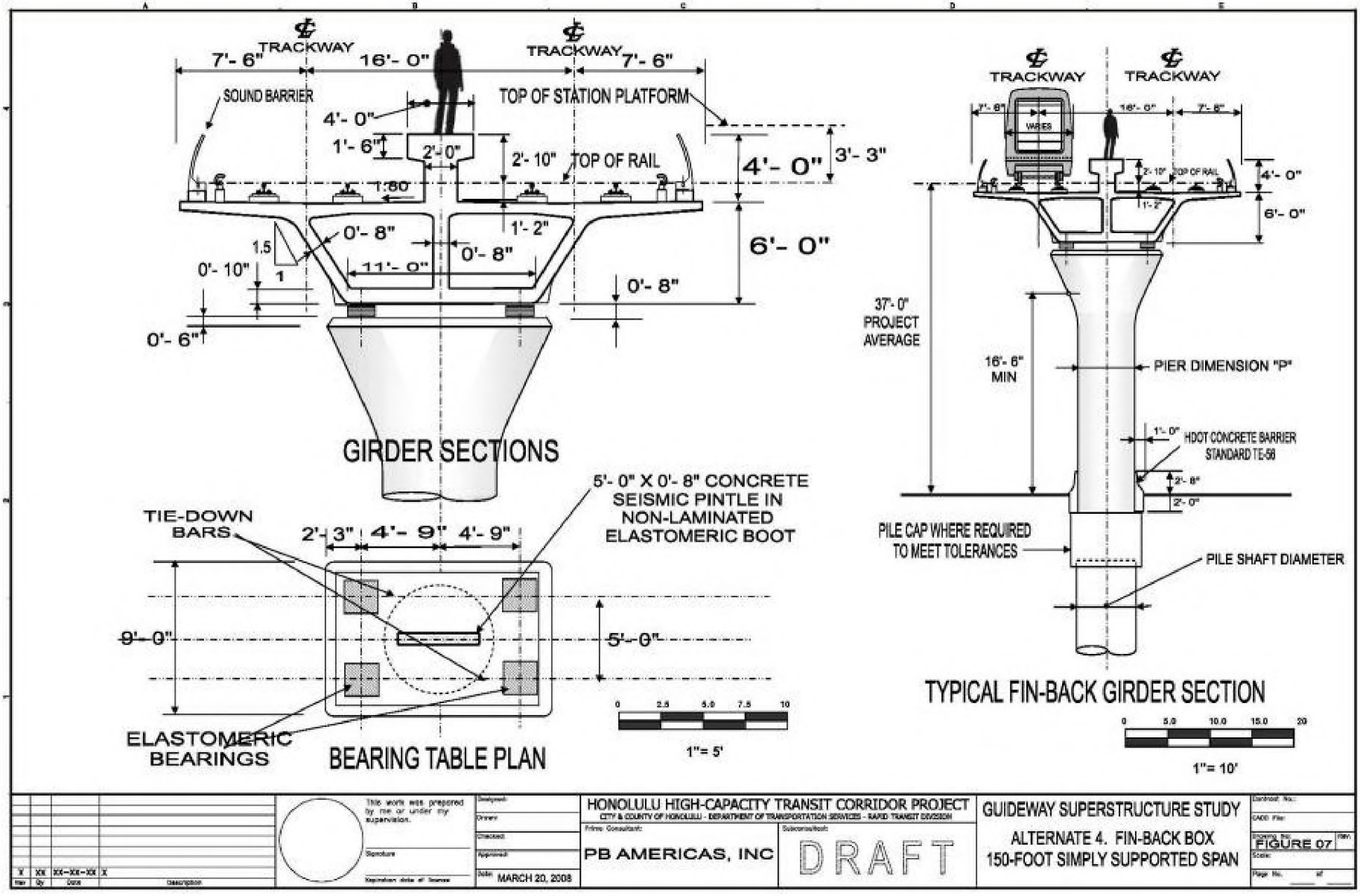
Trapezoidal Box Girder



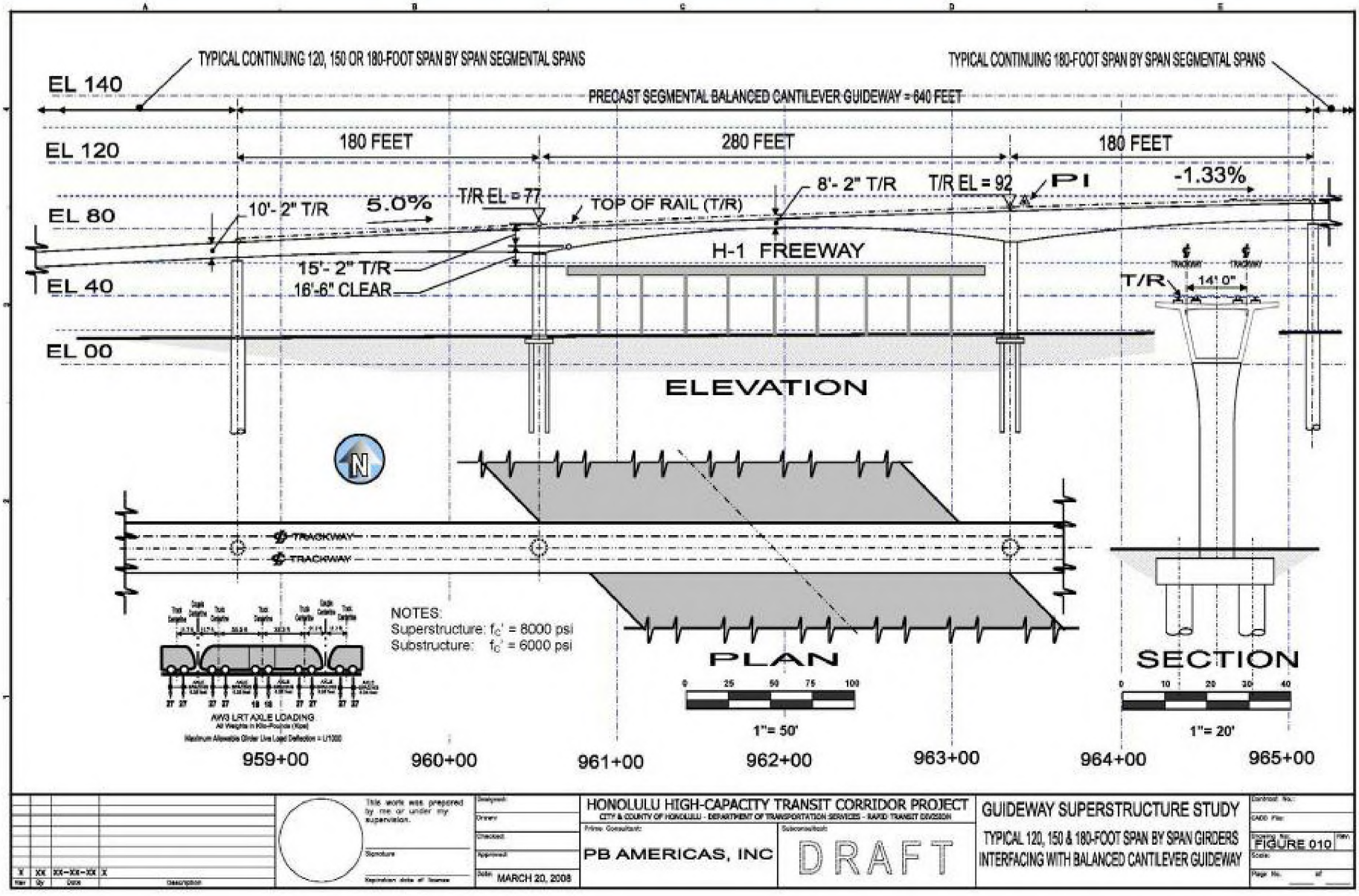
Twin Track Single Tub



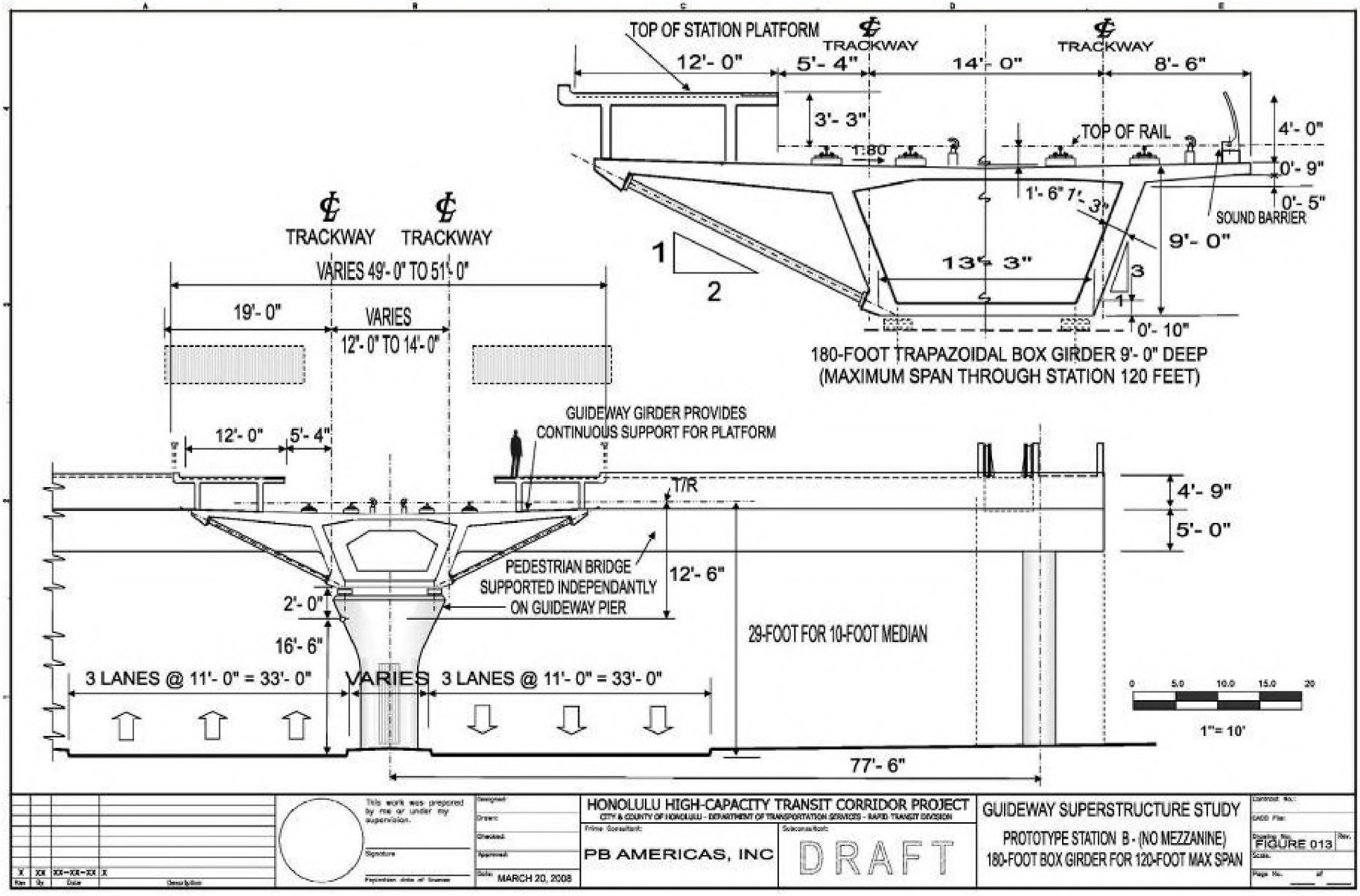
Fin-Back Box Girder



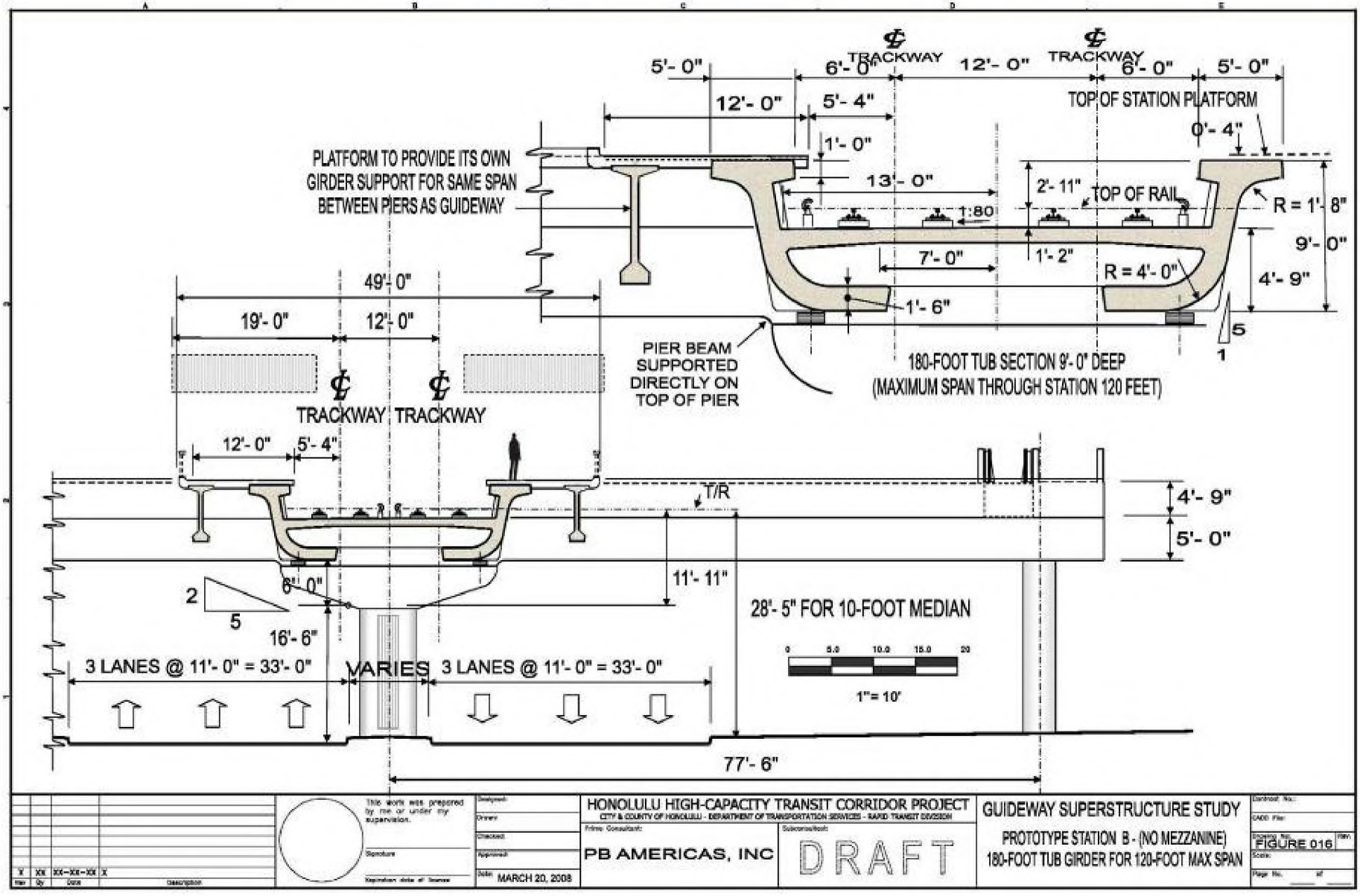
Span-by-Span Girders Interfacing with Balanced Cantilever Guideway



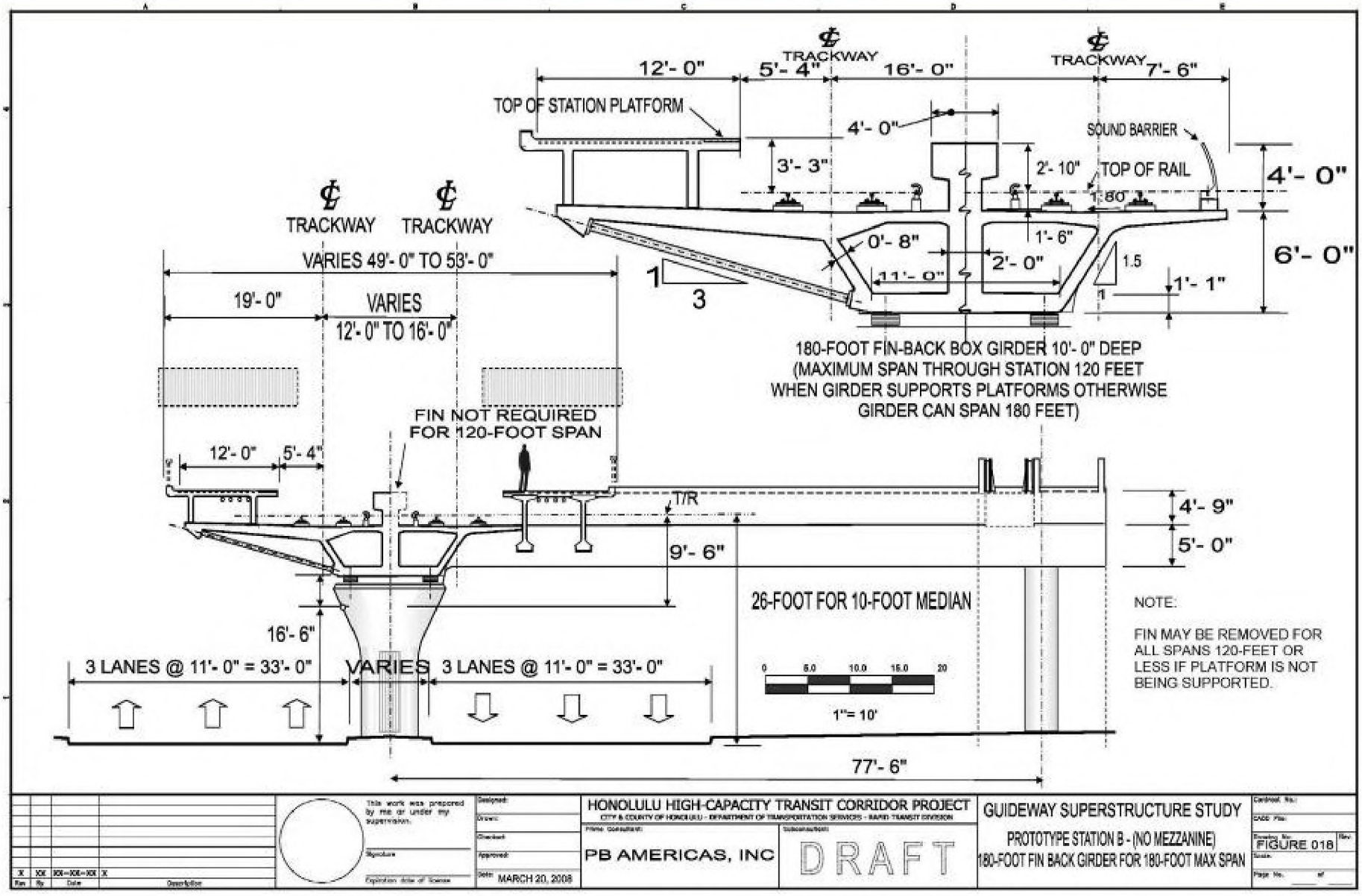
Prototype Station
Trapezoidal Box Girder



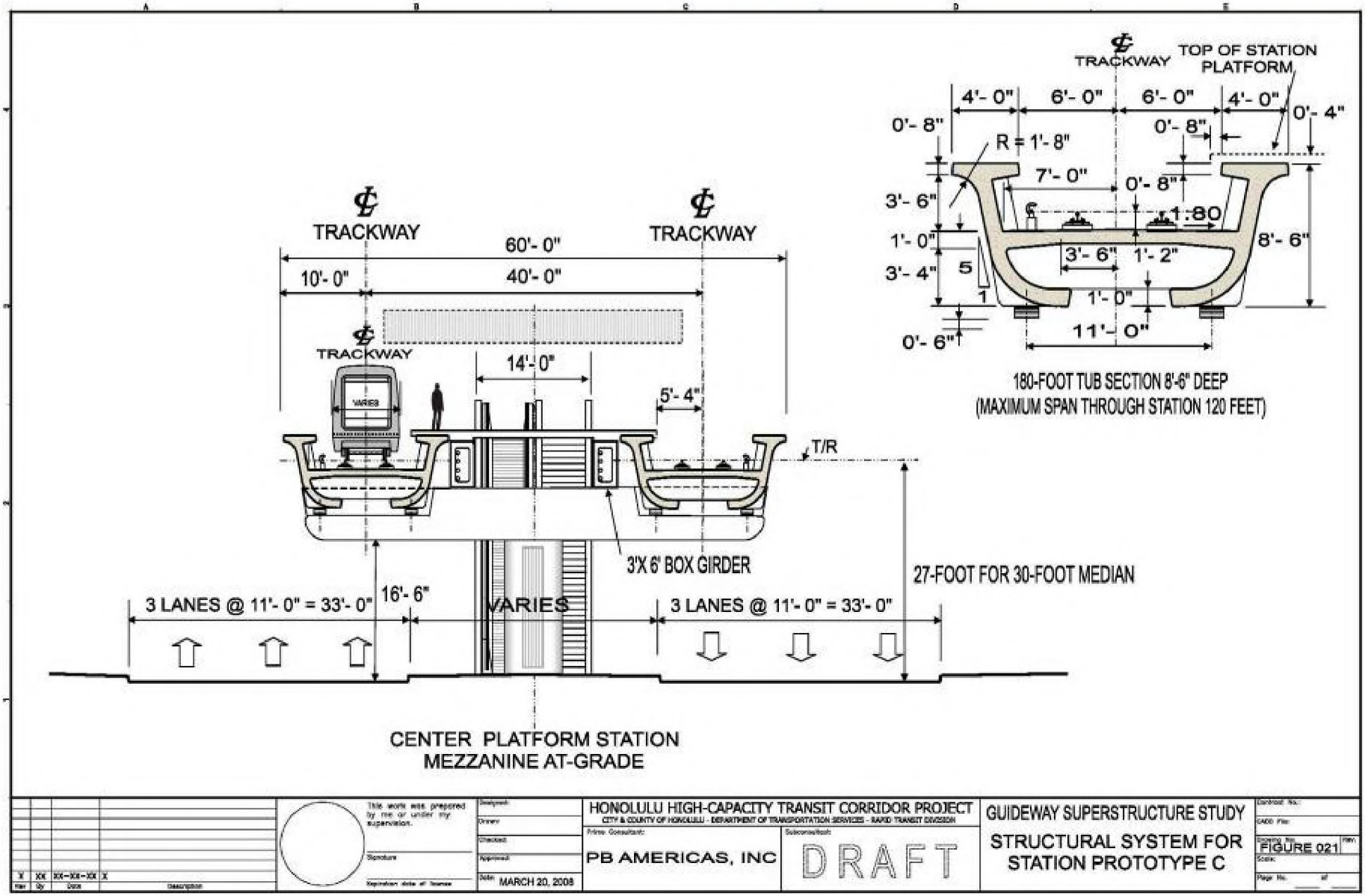
Prototype Station
Twin Track Single Tub Girder



Prototype Station
Fin-Back Girder



Prototype Station
Twin Tubs



Guideway Evaluation Considerations

- Cost
- Schedule
- Aesthetics
- Compatibility with Alignment Geometrics
- Compatibility with Station Types
- Passenger Comfort (Vehicle/Structure Interaction)

Geotechnical Information

- Approximately 100 existing borings
- Additional 45 Planned
- Industry Review Recommended Boring at approximately every Pier
- Evaluating recommendations based on types of information, variability, risk and ability to obtain information

Surface Geology on O'ahu

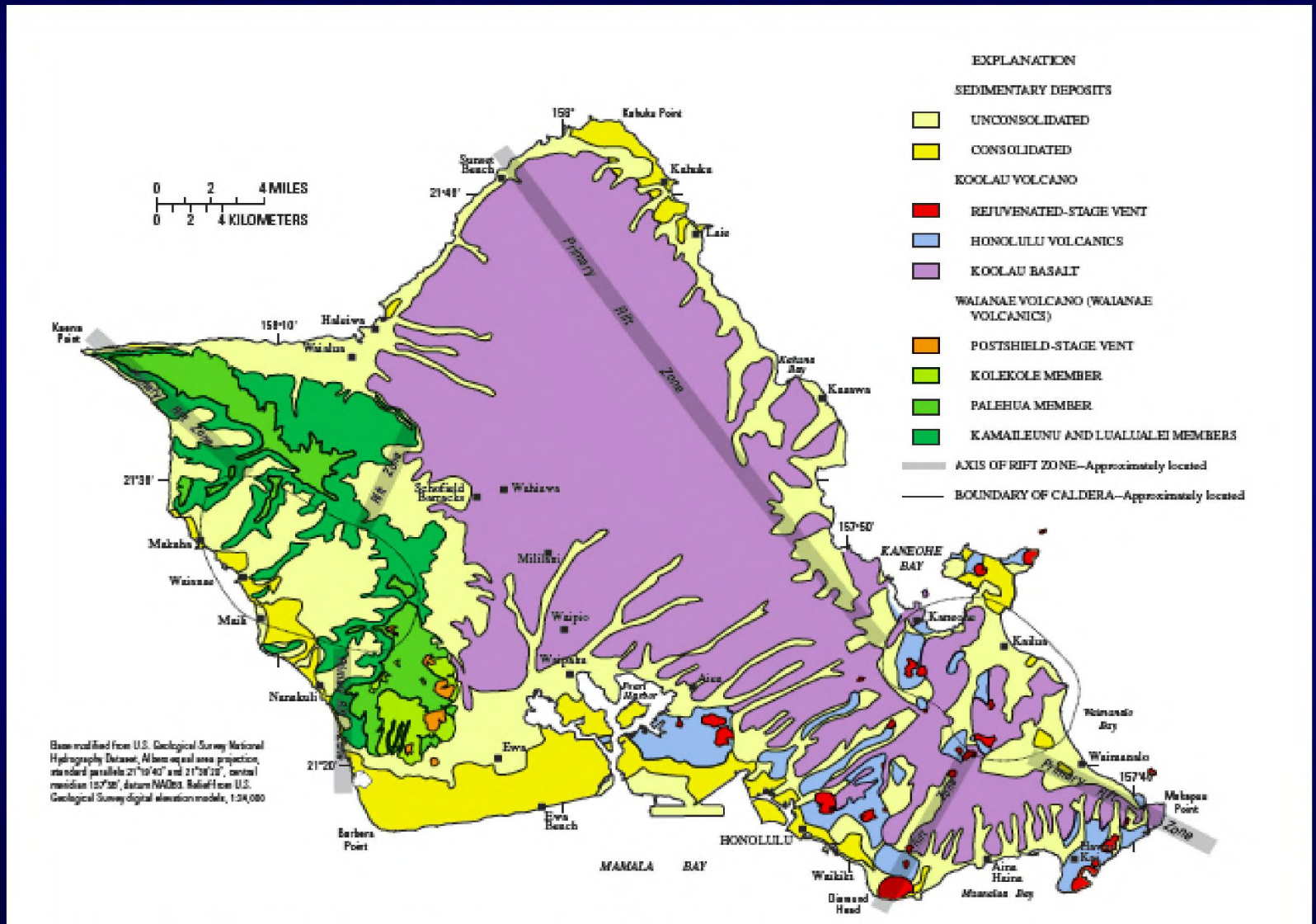


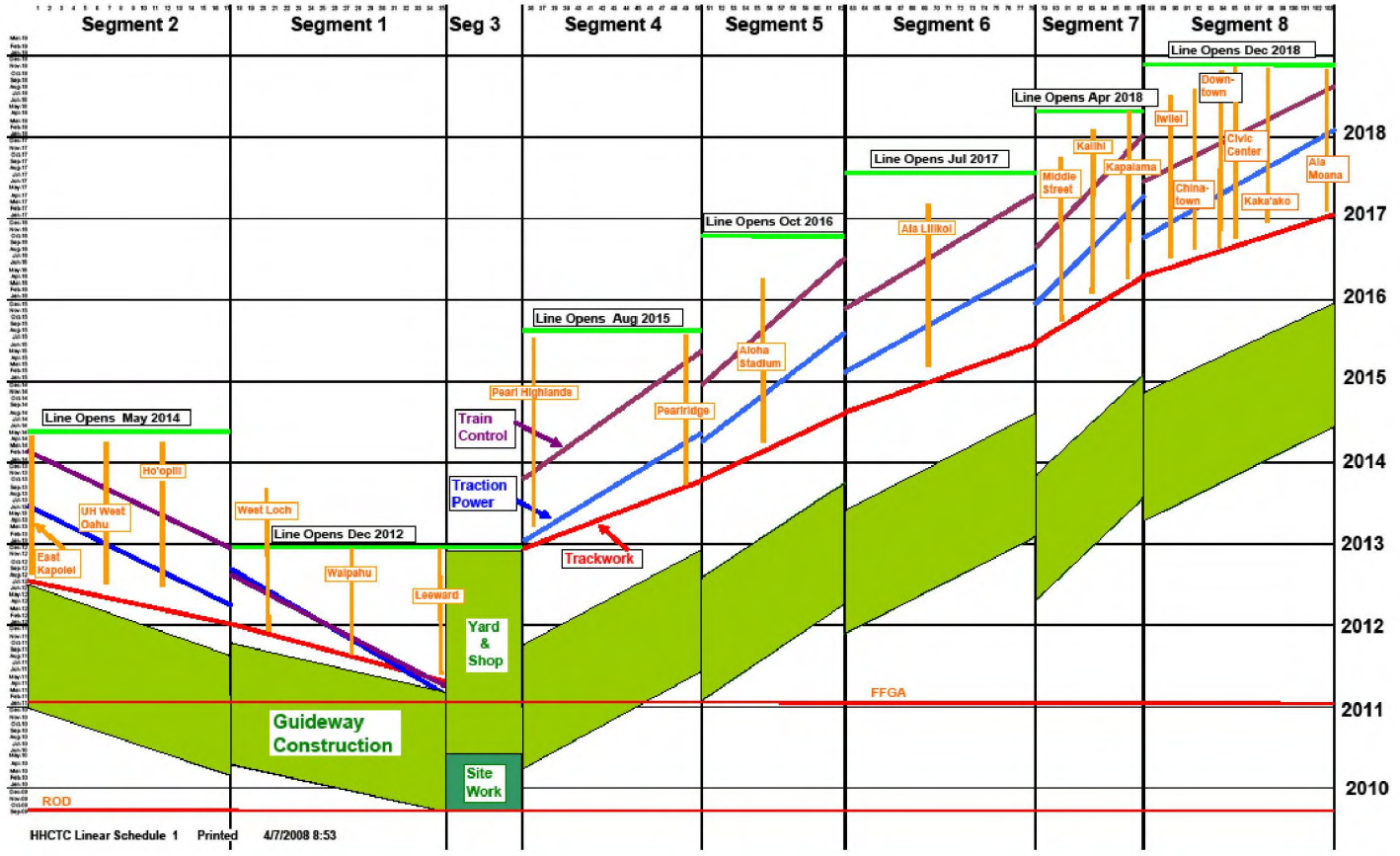
Figure 5. Generalized surficial geology, Oahu, Hawaii (modified from Stearns, 1939; Langenheim and Clague, 1987; Presley and others, 1997).


NORTH SOUTH ROAD
W.O.: 3860-30
BORING # 23
BOX # 2
FROM 18.5' TO 28.5'
DATE 12/9 / 2005
28.5


NORTH SOUTH ROAD
W.O.: 3860-30
BORING # 41
BOX #
FROM 15.75' TO 50.0'
DATE 1/17 / 2006
15.75
20.5
25.5
30.5
35.5
45.5
50.5

Utility Relocation Activities

Harvey Berliner, RTD
Art Borst, GEC


Segment 2
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West Loch
Waipahu
Leeward
Yard & Shop
Guideway Construction
Site Work
FFGA
ROD
2018
2017
2016
2015
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2012
2011
2010
HHCTC Linear Schedule 1 Printed 4/7/2008 8:53

Segments 1 and 2

- Due to schedule, utility relocations will be included in the initial design/build contracts
- Utilities include:
  - Sewer
  - Water
  - Gas
  - Navy fuel
  - Private Communications

Segments 4, 5, 6, 7 and 8

- Recommend Advance Utility Relocation contract
- Allows infrastructure contractors to immediately begin heavy construction

Segment 4 Critical Utilities

- Military Communications
- HECO High Voltage Transmission Lines (above ground)
- Water/Wastewater Pipelines

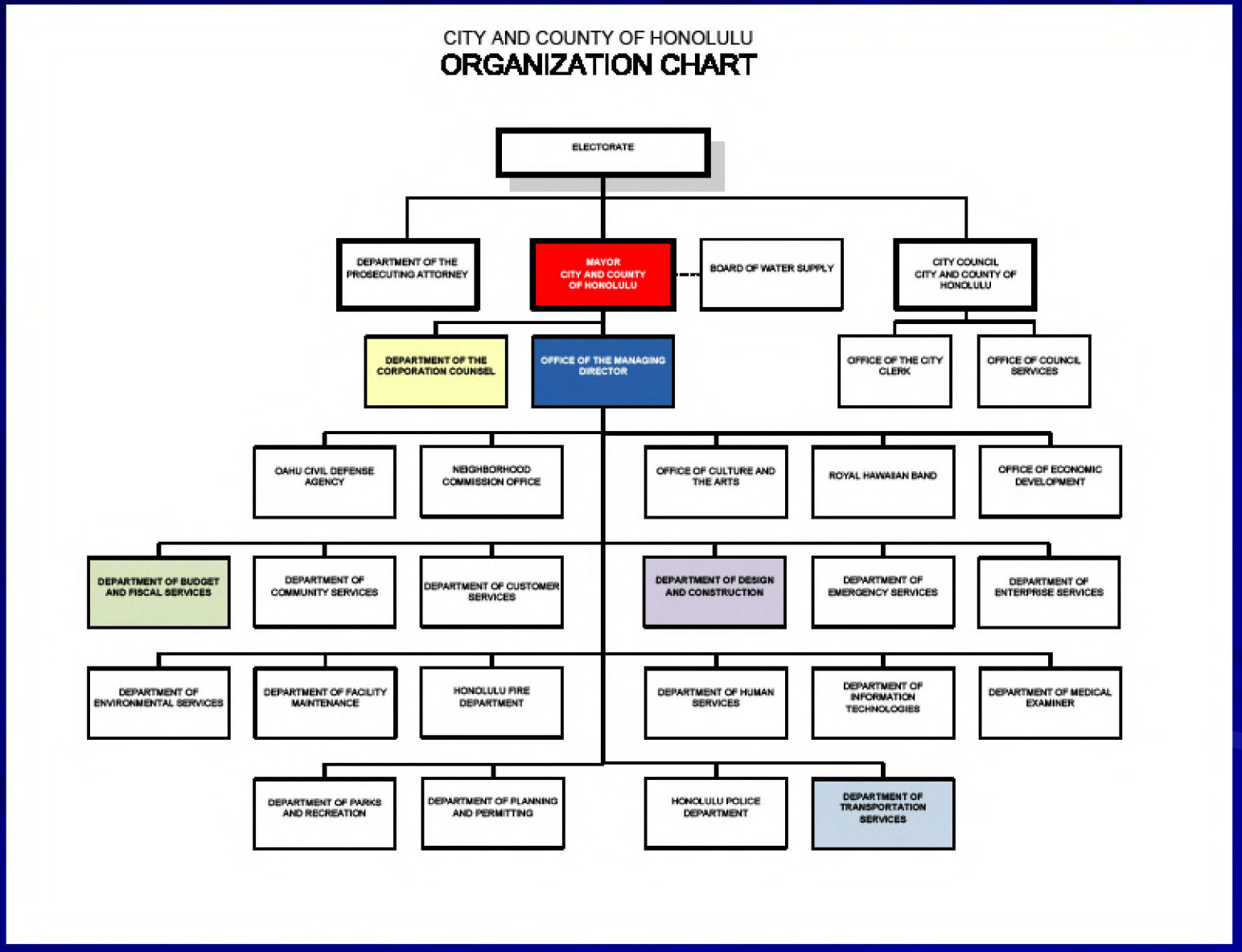
Segments 5, 6 & 7 Critical Utilities

- HECO High Voltage Transmission Lines (above ground)
- Water Supply Force Main
- Stormwater & Wastewater Pipelines
- Communications

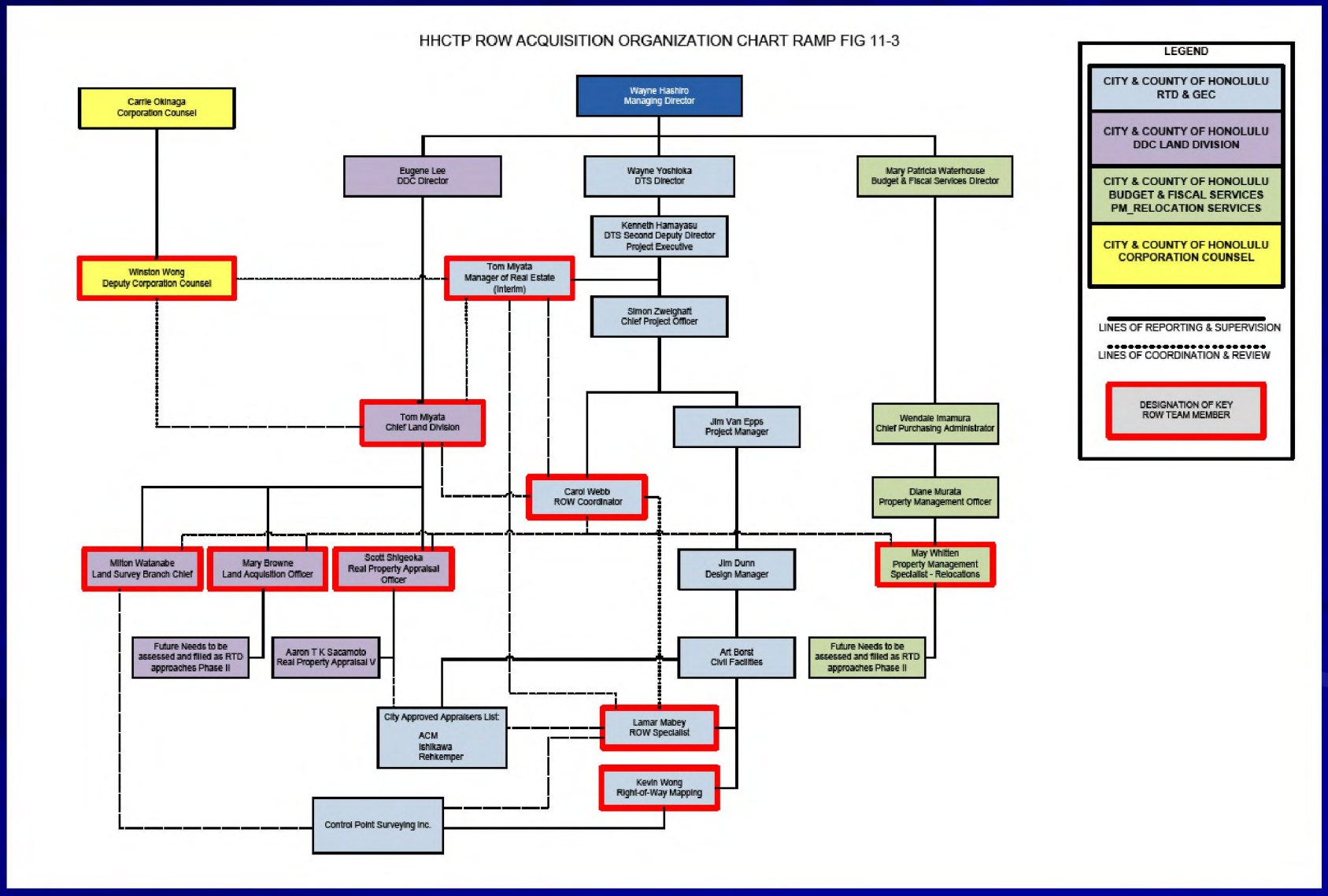
Segment 8 Critical Utilities

- HECO High Voltage Transmission Lines (oil cased underground)
- Underground Utilities along Nimitz Highway

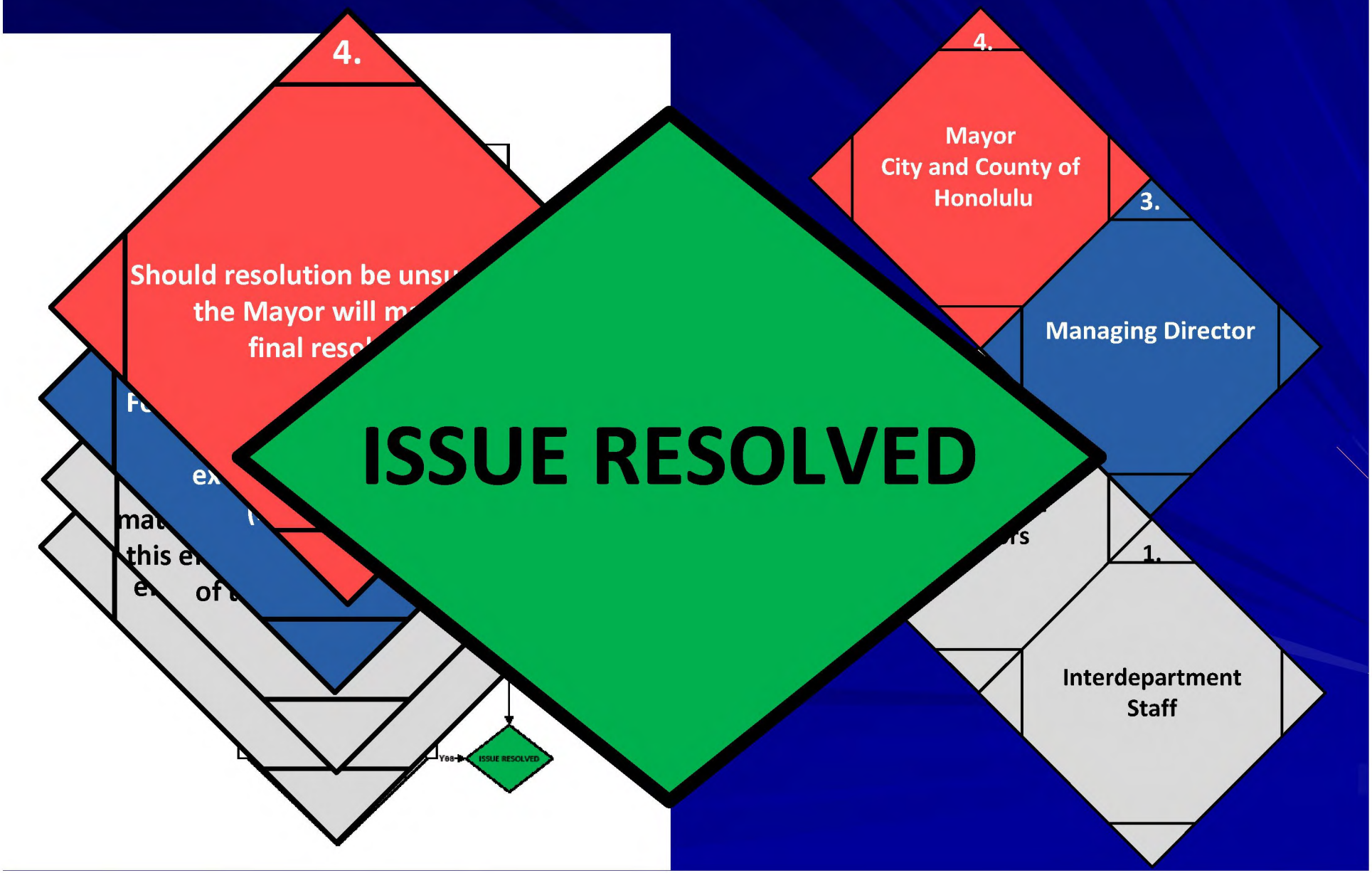
HHCTCP Right-of-Way



ROW Acquisitions Organizational Structure

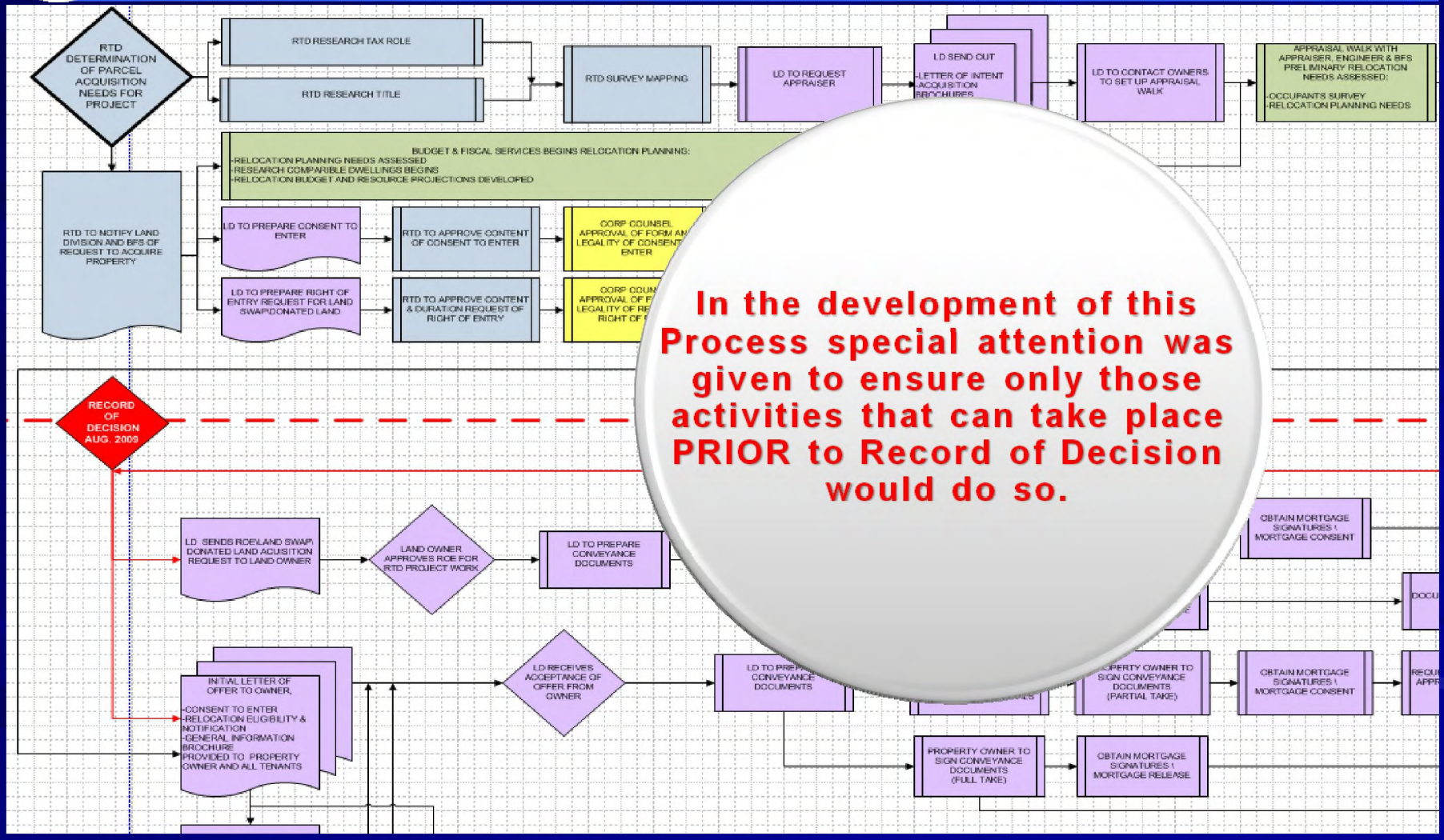


HHCTCP
Interdepartmental Issues Resolution Process



Right-of-Way Process

The ROW Team worked to develop the ROW Acquisition Process Flow Chart for the HHCTCP using existing City processes and modified them to fit the needs of this Project.



In the development of this Process special attention was given to ensure only those activities that can take place PRIOR to Record of Decision would do so.

ROW Acquisition Tracking Report (ATR)

(Note: Acquisition ID's should always have a min. of 6 characters that mirror the TMK Parcel No. _016-000)
LS = Line Segment Number
ST = Station Number
TP = Traction Power
YS = Yard & Shop
This is just an early representation of how we intend to build logic into the Parcel Identifier No. The actual sequency of No's will be determined as the Project progresses.

IT CORRIDOR PROJECT
KING REPORT

RAMP APPENDIX E.2
SUBJECT TO CHANGES

	City & County of Honolulu Tax Map Key Zone-Section-Plat-Parcel	ACQUISITION NO.	PHASE	SEGMENT	PROPERTY ADDRESS_GIS	LAND AGENT	DATE LD SEND OUT: LETTER OF INTENT, ACQUISITION BROCHURES, RELOCATION BROCHURE, GENERAL INFORMATION BROCHURE	DATE LD CONTACTED OWNERS TO SET UP APPRAISAL WALK WITH APPRAISER, ENGINEER & BFS	DATE TITLE REC'D	DATE SURVEY REC'D	DATE APPRAISALS REQUESTED	DATE OF SITE INSPECTION (APPRAISAL WALK)
1	1-6-016-001	LS06_016-001	1	B	Zone1-Section 6-PLAT 016-Parcel 001							
2	1-6-016-002	ST07_016-002	1	C	3446 Farrington HWY							
3	1-6-016-006	TP06_016-006	1	C	Zone1-Section 6-PLAT 016-Parcel 006							
4	1-6-017-001	LS06_017-001	1	B	Zone1-Section 6-PLAT 017-Parcel 001							

The ATR is the centralized Data Collection Tool for all of the Acquisition Stakeholders. This spreadsheet will be utilized by Land Division, Budget Fiscal Services, and the RTD. The Project ROW Coordinator will be responsible for the transfer of DATA to and from this document as needed for generating and updating reports.

ROW Relocation Tracking Report (RTR)

RAMP APPENDIX E.2
SUBJECT TO CHANGES

HONOLULU HIGH CAPACITY TRANSIT CORRIDOR PROJECT
ROW RELOCATION TRACKING REPORT

RAMP APPENDIX E.2
SUBJECT TO CHANGES

(Note: Acquisition ID's should always have a min. of 6 characters that mirror the TMK Parcel No. _016-000)
LS = Line Segment Number
ST = Station Number
TP = Traction Power
YS = Yard & Shop
This is just an early representation of how we intend to build logic into the Parcel Identifier No. The actual sequency of No's will be determined as the Project progresses.

	City & County of Honolulu Tax Map Key Zone-Section-Plat-Parcel	ACQUISITION NO.	PHASE	SEGMENT	PROPERTY ADDRESS_GIS	OWNER NAME	OWNER MAILING ADDRESS	OWNER PHONE NUMBER	TAKE (Full, Partial, Corner Clip, Land Swap, Deanted Lands)	PROPERTY TYPE (COM, RES, Vacant Land)	RELO AGENT	DATE PRELIM OCCUPANT INTERVIEW (APPRAISAL WALK)	OCCUPANT RECEIVES GENERAL INFORMATION NOTICE	DATE DETAILED OCCUPANCY SURVEY	DETERMINATION OF ELIGIBILITY FOR RELOCATION BENEFITS	OCCUPANT RECEIVES NOTICE OF ELIGIBILITY FOR RELOCATION BENEFITS	OCCUPANT RECEIVES 90-DAY NOTICE
1	1-8-016-001	L808_016-001	1	B	Zone1-Section 6-PLAT 016-Parcel 001				PR								
2	1-8-016-002	ST07_016-002	1	C	3446 Farrington HWY				PR								
3	1-8-016-006	TP06_016-006	1	C	Zone1-Section 6-PLAT 016-Parcel 006				DL								
4	1-8-017-001	L808_017-001	1	B	Zone1-Section 6-PLAT 017-Parcel 001				Full								

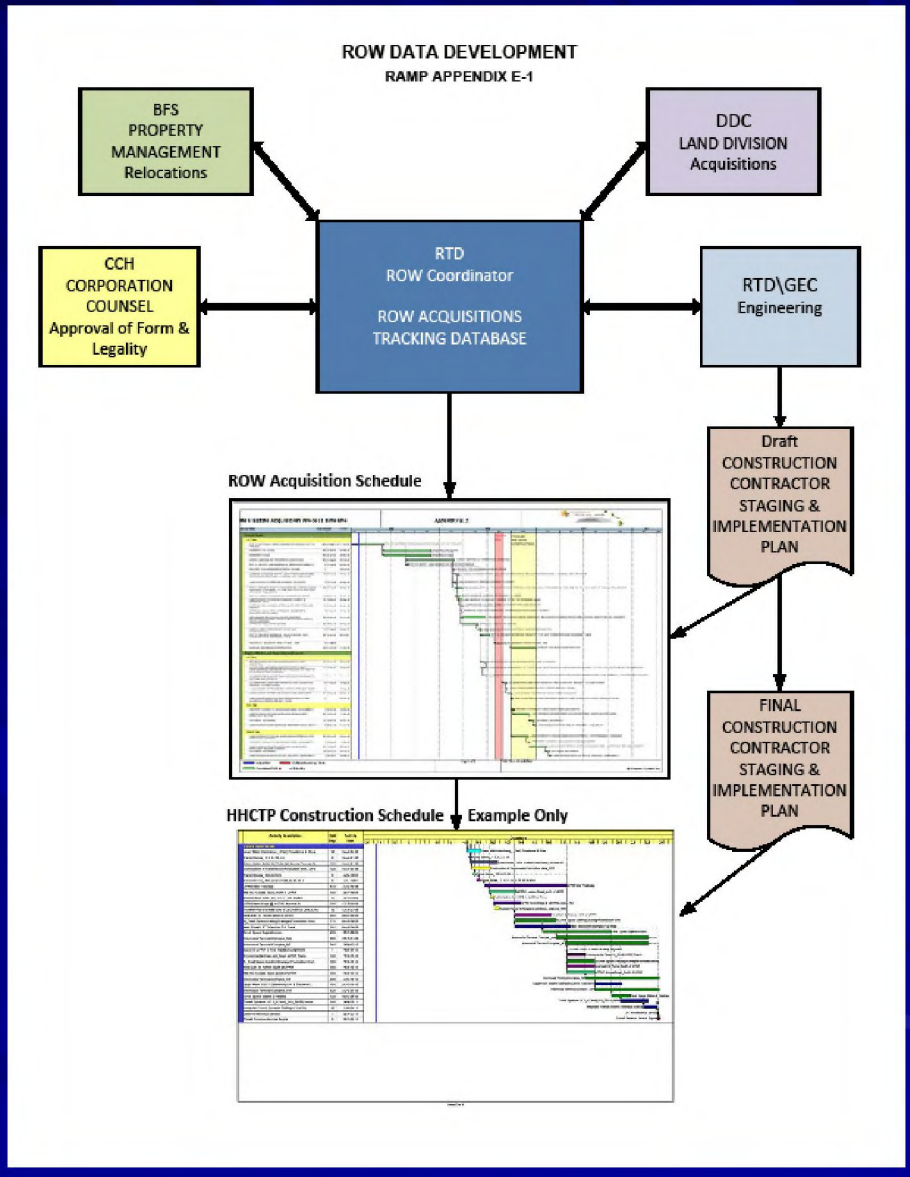
The RTR

Unlike the Acquisition Tracking Report this spreadsheet will be maintained by the BFS Relocation Agent. The RELO Agent will retrieve and provide data to and from the Acquisition Tracking Report

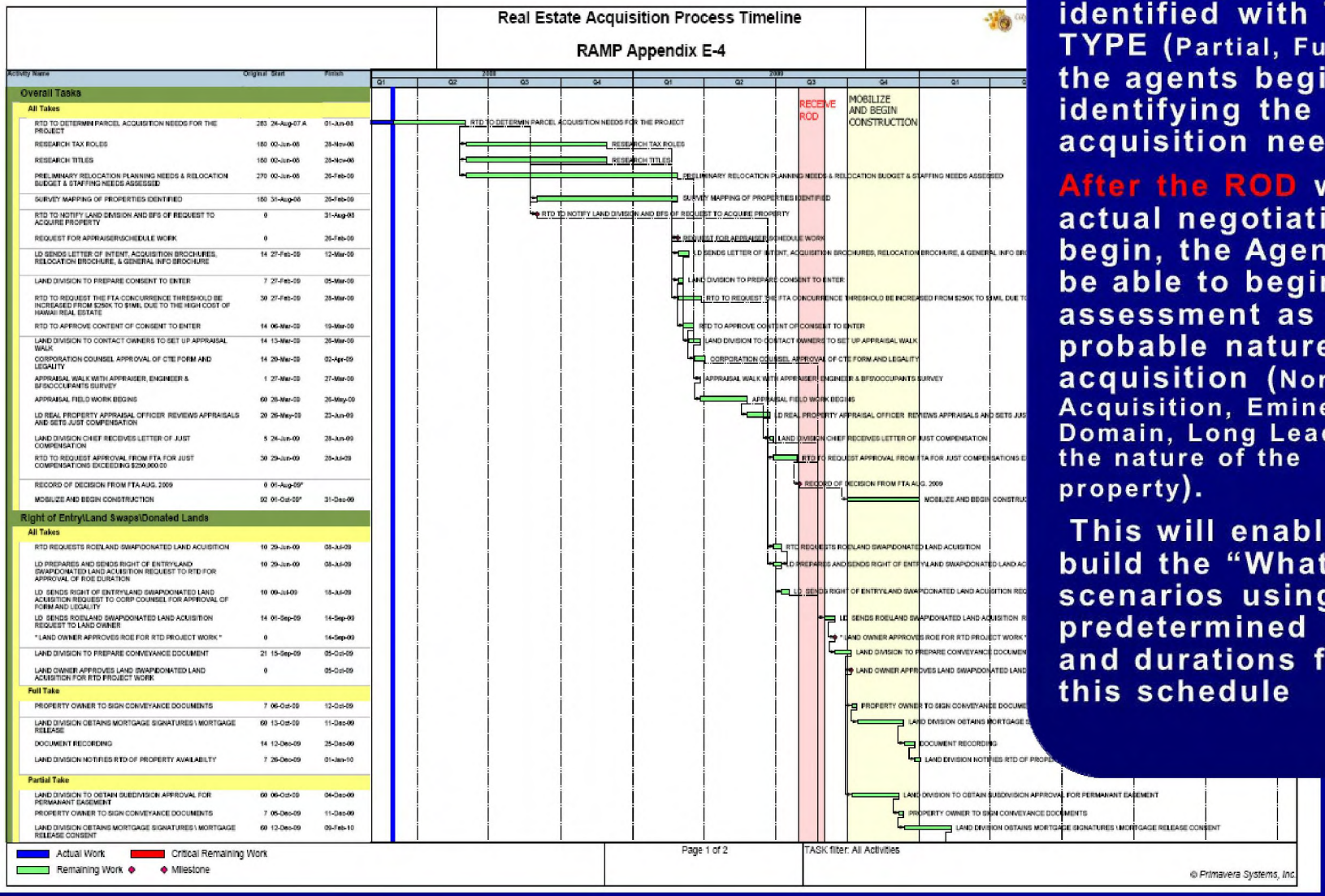
ROW Data Development

DATA is collected and transferred to all of the ROW Stakeholders. The data from the ATR is used to generate the ROW Acquisition Schedule.

The purpose of this schedule is to identify the logic and durations associated with the different types of possible acquisitions.



ROW Acquisition Process Timeline Schedule

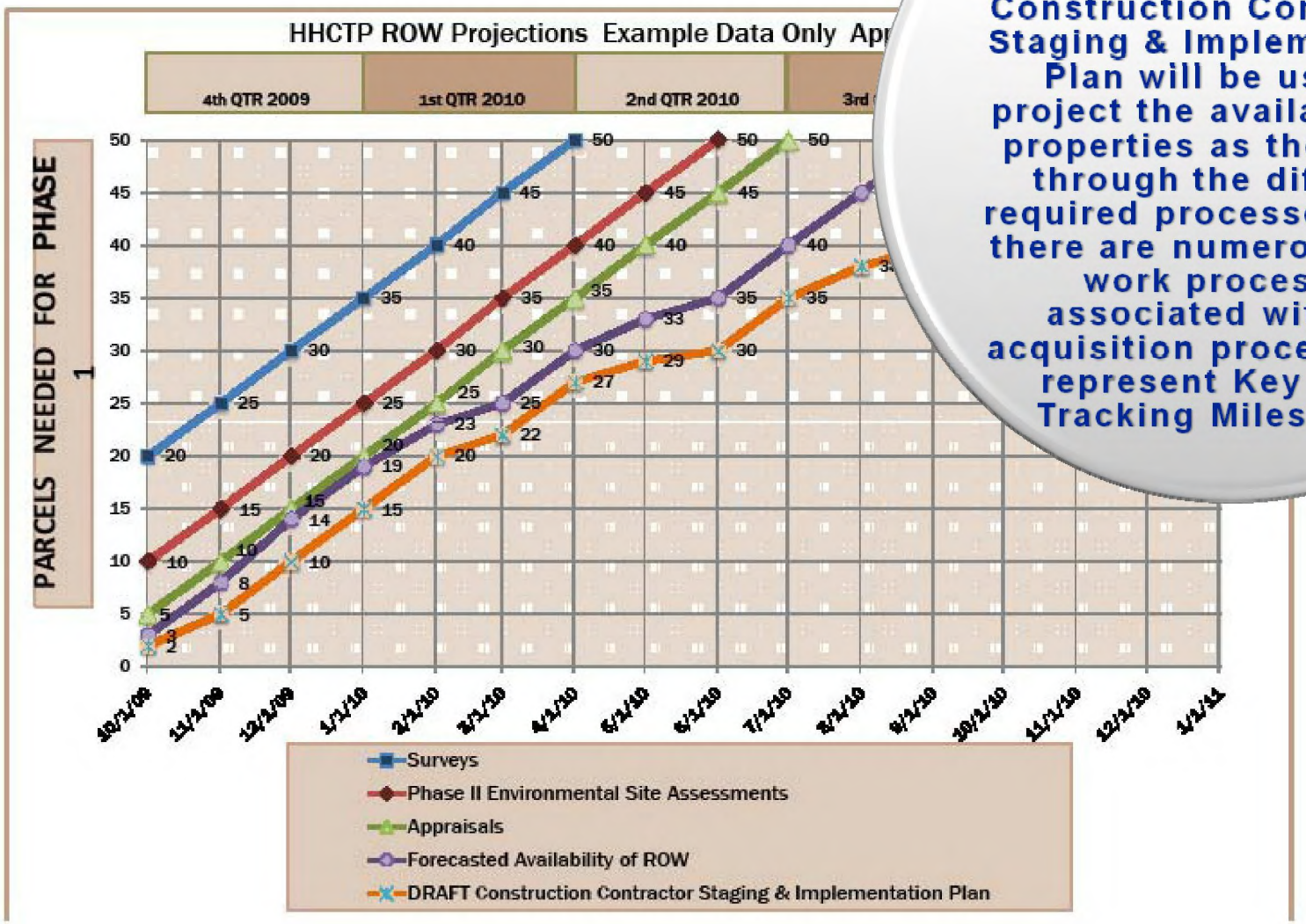


Once properties are identified with TAKE TYPE (Partial, Full) then the agents begin identifying the acquisition needs.

After the ROD when actual negotiations begin, the Agents will be able to begin their assessment as to the probable nature of the acquisition (Normal Acquisition, Eminent Domain, Long Lead due to the nature of the property).

This will enable us to build the "What If" scenarios using the predetermined logic and durations from this schedule

ROW Projections



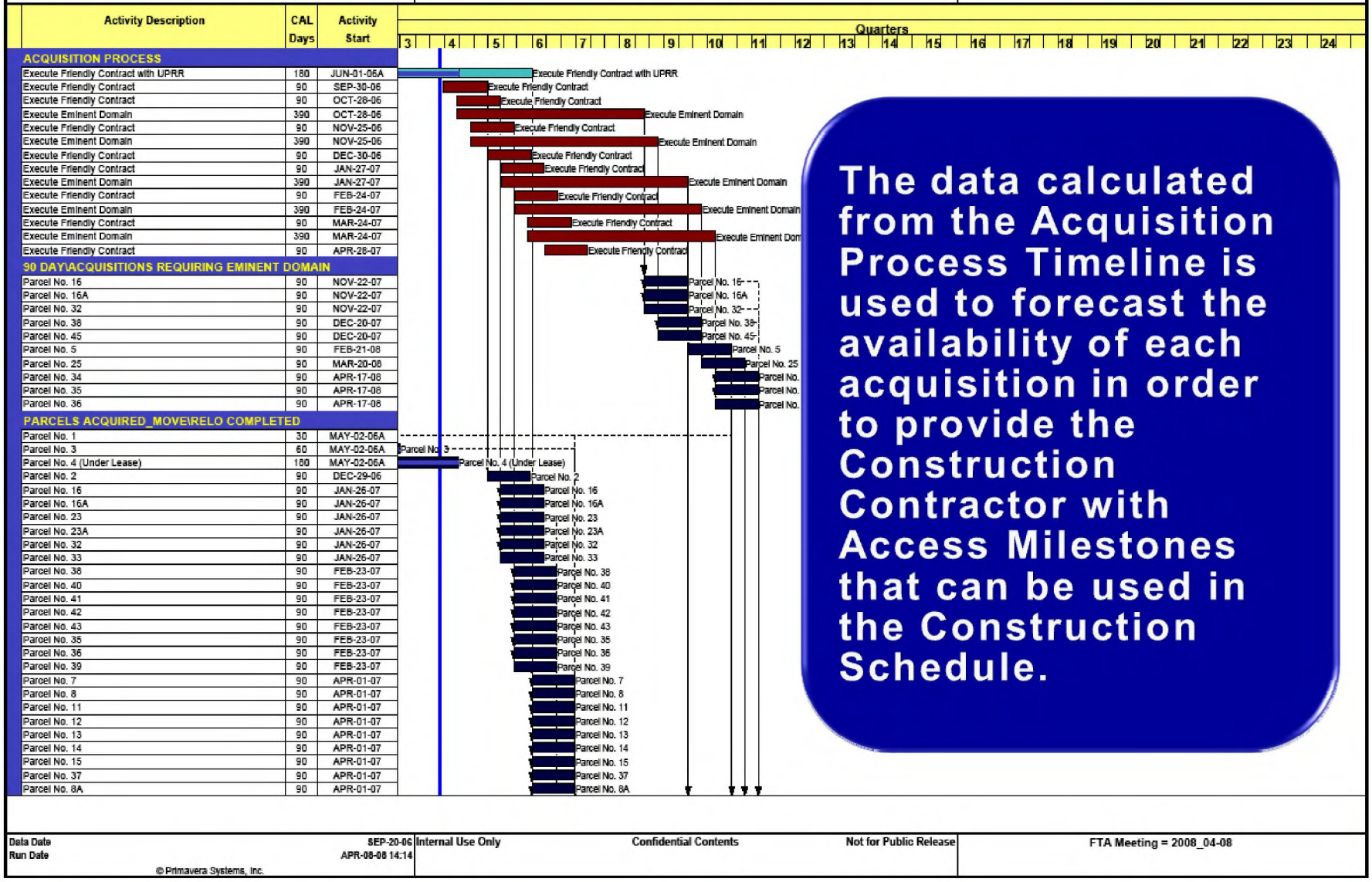
The data collected from the ATR, the Acquisition Process Timeline Schedule and the Construction Contractors Staging & Implementation Plan will be used to project the availability of properties as they move through the different required processes. While there are numerous other work processes associated with the acquisition process these represent Key Major Tracking Milestones.

Construction Schedule

EXAMPLE
ROW ACQUISITION INTERFACE WITH CONSTRUCTION

ROW AVAILABILITY
What If Scenarios

HHCTCP



Activity Description	CAL Days	Activity Start
ACQUISITION PROCESS		
Execute Friendly Contract with UPRR	180	JUN-01-06A
Execute Friendly Contract	90	SEP-30-06
Execute Friendly Contract	90	OCT-28-06
Execute Eminent Domain	390	OCT-28-06
Execute Friendly Contract	90	NOV-25-06
Execute Eminent Domain	390	NOV-25-06
Execute Friendly Contract	90	DEC-30-06
Execute Friendly Contract	90	JAN-27-07
Execute Eminent Domain	390	JAN-27-07
Execute Friendly Contract	90	FEB-24-07
Execute Eminent Domain	390	FEB-24-07
Execute Friendly Contract	90	MAR-24-07
Execute Eminent Domain	390	MAR-24-07
Execute Friendly Contract	90	APR-28-07
90 DAY\ACQUISITIONS REQUIRING EMINENT DOMAIN		
Parcel No. 16	90	NOV-22-07
Parcel No. 16A	90	NOV-22-07
Parcel No. 32	90	NOV-22-07
Parcel No. 38	90	DEC-20-07
Parcel No. 45	90	DEC-20-07
Parcel No. 5	90	FEB-21-08
Parcel No. 25	90	MAR-20-08
Parcel No. 34	90	APR-17-08
Parcel No. 35	90	APR-17-08
Parcel No. 36	90	APR-17-08
PARCELS ACQUIRED_MOVE\RELO COMPLETED		
Parcel No. 1	30	MAY-02-06A
Parcel No. 3	60	MAY-02-06A
Parcel No. 4 (Under Lease)	180	MAY-02-06A
Parcel No. 2	90	DEC-29-06
Parcel No. 16	90	JAN-26-07
Parcel No. 16A	90	JAN-26-07
Parcel No. 23	90	JAN-26-07
Parcel No. 23A	90	JAN-26-07
Parcel No. 32	90	JAN-26-07
Parcel No. 33	90	JAN-26-07
Parcel No. 38	90	FEB-23-07
Parcel No. 40	90	FEB-23-07
Parcel No. 41	90	FEB-23-07
Parcel No. 42	90	FEB-23-07
Parcel No. 43	90	FEB-23-07
Parcel No. 35	90	FEB-23-07
Parcel No. 36	90	FEB-23-07
Parcel No. 39	90	FEB-23-07
Parcel No. 7	90	APR-01-07
Parcel No. 8	90	APR-01-07
Parcel No. 11	90	APR-01-07
Parcel No. 12	90	APR-01-07
Parcel No. 13	90	APR-01-07
Parcel No. 14	90	APR-01-07
Parcel No. 15	90	APR-01-07
Parcel No. 37	90	APR-01-07
Parcel No. 8A	90	APR-01-07

Quarters: 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

The data calculated from the Acquisition Process Timeline is used to forecast the availability of each acquisition in order to provide the Construction Contractor with Access Milestones that can be used in the Construction Schedule.

Data Date SEP-20-06
Run Date APR-08-08 14:14

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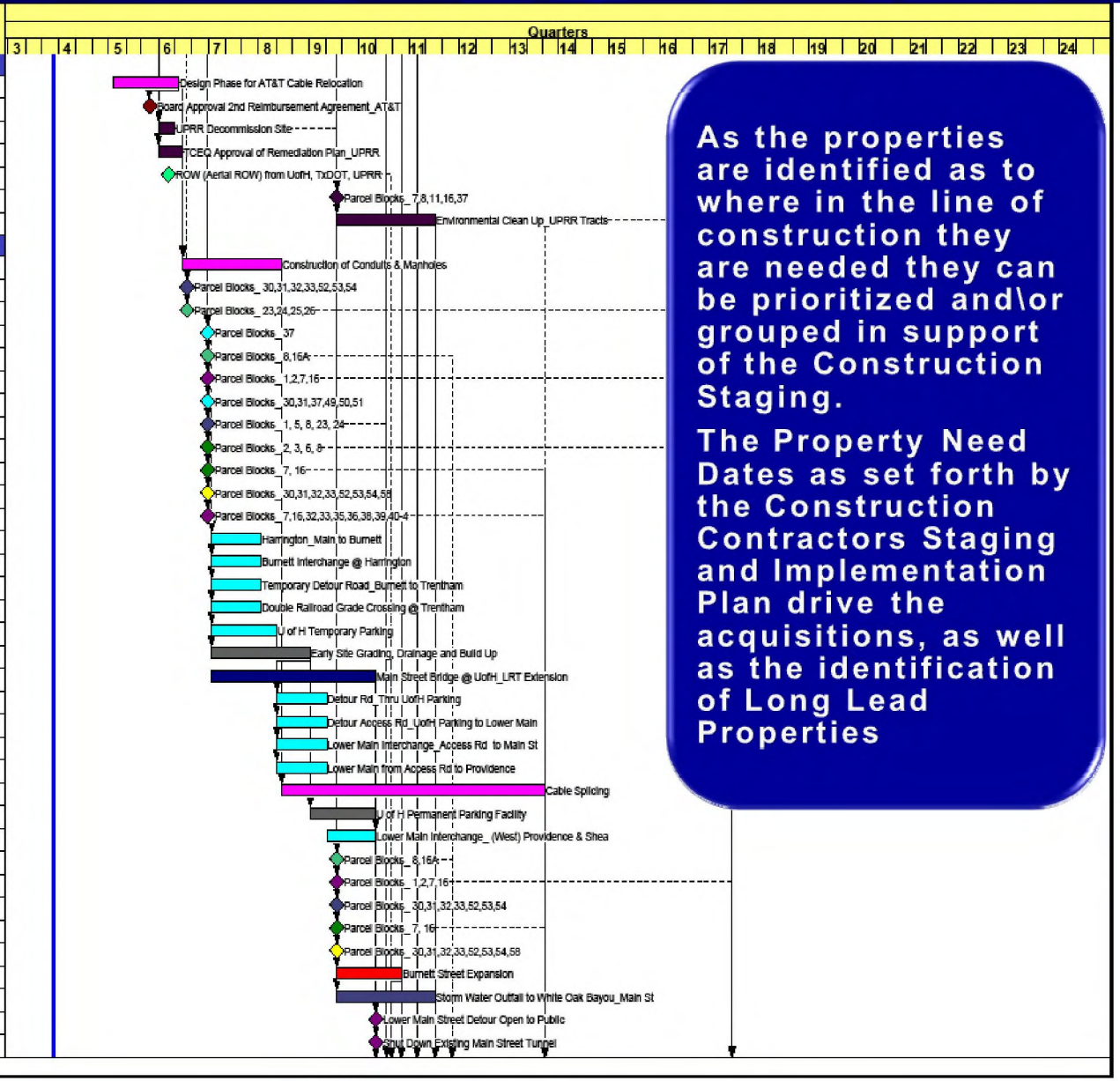
FTA Meeting = 2008_04-08

Construction Schedule

Activity Description	CAL Days	Activity Start
PRE-CONSTRUCTION ACTIVITIES		
Design Phase for AT&T Cable Relocation	120	JAN-09-07
Board Approval 2nd Reimbursement Agreement_AT&T	0	
UPRR Decommission Site	30	APR-01-07
TCEQ Approval of Remediation Plan_UPRR	45	APR-01-07
ROW (Aerial ROW) from UofH, TxDOT, UPRR	0	
Parcel Blocks_ 7,8,11,16,37	0	FEB-20-08
Environmental Clean Up_UPRR Tracts	180	FEB-20-08
CONSTRUCTION		
Construction of Conduits & Manholes	180	MAY-16-07
Parcel Blocks_ 30,31,32,33,52,53,54	0	MAY-24-07
Parcel Blocks_ 23,24,25,26	0	MAY-24-07
Parcel Blocks_ 37	0	JUN-30-07
Parcel Blocks_ 8,16A	0	JUN-30-07
Parcel Blocks_ 1,2,7,16	0	JUN-30-07
Parcel Blocks_ 30,31,37,49,50,51	0	JUN-30-07
Parcel Blocks_ 1, 5, 8, 23, 24	0	JUN-30-07
Parcel Blocks_ 2, 3, 6, 8	0	JUN-30-07
Parcel Blocks_ 7, 16	0	JUN-30-07
Parcel Blocks_ 30,31,32,33,52,53,54,58	0	JUN-30-07
Parcel Blocks_ 7,16,32,33,35,36,38,39,40-4	0	JUN-30-07
Harrington_Main to Burnett	90	JUL-07-07
Burnett Interchange @ Harrington	90	JUL-07-07
Temporary Detour Road_Burnett to Trentham	90	JUL-07-07
Double Railroad Grade Crossing @ Trentham	90	JUL-07-07
U of H Temporary Parking	120	JUL-07-07
Early Site Grading, Drainage and Build Up	180	JUL-07-07
Main Street Bridge @ UofH_LRT Extension	300	JUL-07-07
Detour Rd_Thru UofH Parking	90	NOV-04-07
Detour Access Rd_UofH Parking to Lower Main	90	NOV-04-07
Lower Main Interchange_Access Rd to Main St	90	NOV-04-07
Lower Main from Access Rd to Providence	90	NOV-04-07
Cable Splicing	480	NOV-12-07
U of H Permanent Parking Facility	120	JAN-03-08
Lower Main Interchange_ (West) Providence & Shea	90	FEB-02-08
Parcel Blocks_ 8,16A	0	FEB-20-08
Parcel Blocks_ 1,2,7,16	0	FEB-20-08
Parcel Blocks_ 30,31,32,33,52,53,54	0	FEB-20-08
Parcel Blocks_ 7, 16	0	FEB-20-08
Parcel Blocks_ 30,31,32,33,52,53,54,58	0	FEB-20-08
Burnett Street Expansion	120	FEB-20-08
Storm Water Outfall to White Oak Bayou_Main St	180	FEB-20-08
Lower Main Street Detour Open to Public	0	
Shut Down Existing Main Street Tunnel	0	

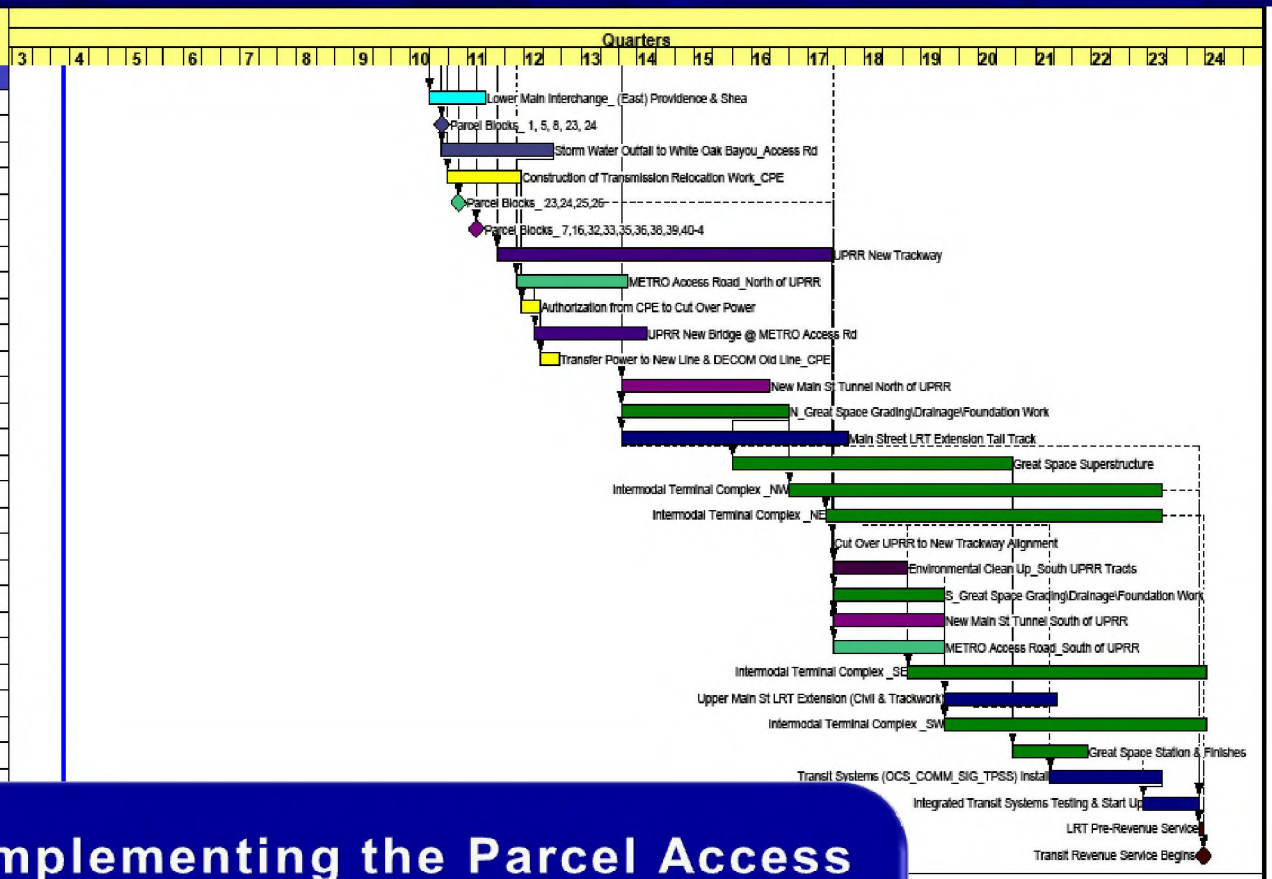


As the properties are identified as to where in the line of construction they are needed they can be prioritized and\or grouped in support of the Construction Staging.

The Property Need Dates as set forth by the Construction Contractors Staging and Implementation Plan drive the acquisitions, as well as the identification of Long Lead Properties

Construction Schedule

Activity Description	CAL Days	Activity Start
CONSTRUCTION		
Lower Main Interchange_ (East) Providence & Shea	90	MAY-02-08
Parcel Blocks_ 1, 5, 8, 23, 24	0	MAY-21-08
Storm Water Outfall to White Oak Bayou_Access Rd	180	MAY-21-08
Construction of Transmission Relocation Work_CPE	120	MAY-30-08
Parcel Blocks_ 23,24,25,26	0	JUN-18-08
Parcel Blocks_ 7,16,32,33,35,36,38,39,40-4	0	JUL-16-08
UPRR New Trackway	540	AUG-18-08
METRO Access Road_North of UPRR	180	SEP-18-08
Authorization from CPE to Cut Over Power	30	SEP-27-08
UPRR New Bridge @ METRO Access Rd	180	OCT-18-08
Transfer Power to New Line & DECOM Old Line_CPE	30	OCT-27-08
New Main St Tunnel North of UPRR	240	MAR-06-09
N_Great Space Grading\Drainage\Foundation Work	270	MAR-06-09
Main Street LRT Extension Tall Track	365	MAR-06-09
Great Space Superstructure	450	SEP-02-09
Intermodal Terminal Complex _NW	600	DEC-01-09
Intermodal Terminal Complex _NE	540	JAN-30-10
Cut Over UPRR to New Trackway Alignment	1	FEB-09-10
Environmental Clean Up_South UPRR Tracts	120	FEB-10-10
S_Great Space Grading\Drainage\Foundation Work	180	FEB-10-10
New Main St Tunnel South of UPRR	180	FEB-10-10
METRO Access Road_South of UPRR	180	FEB-10-10
Intermodal Terminal Complex _SE	480	JUN-10-10
Upper Main St LRT Extension (Civil & Trackwork)	180	AUG-09-10
Intermodal Terminal Complex _SW	420	AUG-09-10
Great Space Station & Finishes	120	NOV-26-10
Transit Systems (OCS_COMM_SIG_TPSS) Install	180	
Integrated Transit Systems Testing & Start Up		
LRT Pre-Revenue Service		
Transit Revenue Service Begins		



By implementing the Parcel Access Milestones in the Construction Schedule if the Acquisition takes longer than first projected, any impacts to construction will be identified by the schedule.

Sheet 3 of 3

ROW Acquisition Tools

With current and accurate data coming out of the weekly interfaces with the ROW Stakeholders, the ROW Team will be able to forecast and prioritize the Acquisitions on a weekly basis.

These tools are designed and implemented in order to aide the Project in keeping the ROW Acquisitions off of the Critical Path.

Mahalo,

Q & A

Structures Design

HHCTCP

Honolulu Guideway Setting

- 20 miles of elevated guideway
- 15+ miles above City streets
- Over 100 intersection crossings plus long spans over expressways
- Community noise concerns
- Community visual concerns
- Adequate but limited project funding resources

Guideway Design Goals

- Maintain of traffic during construction
- Retain surface capacity in final configuration
  - Maximize column spacing
  - Use C-bents and straddle bents where necessary
- Extensive sound barrier walls
- Need to minimize girder depth
- Need to minimize C-bents and straddle bents
- Reasonable construction costs

Girders

- Steel
- Concrete
  - Precast
  - Cast-in-Place
  - Segmental
  - Other Shapes

Guideway Dimensions

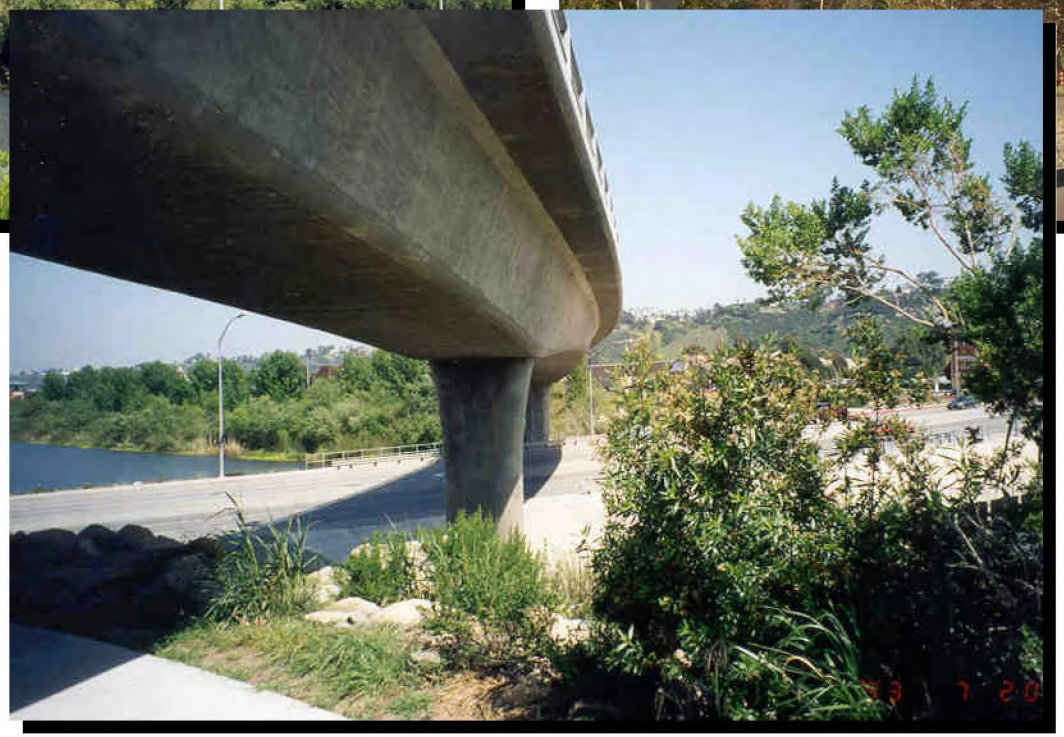
	MARTA	St. Louis	Tren Urbano	JFK Airport	LA Blue Line
Pier Width at Base					
Double Track	7.00	7.00	6.56	6.00	6.25
Single Track	5.00	7.00	5.31	5.00	5.50
Girder Deck Width					
Double Track	30.25	34.50	32.48	33.00	26.00
Single Track	17.25	14.60	18.70	17.25	14.00
Girder Depth	6.00	5.30	6.89	7.17	6.25
Girder Span	120.00	80.00	n/a	125.00	135.00

(Dimensions in Feet)

Steel Girders

Precast Girders

Cast-in-Place Girders



San Diego

Segmental Girders

JFK Airport

Segmental Girders

Segmental Girders

JFK Airport

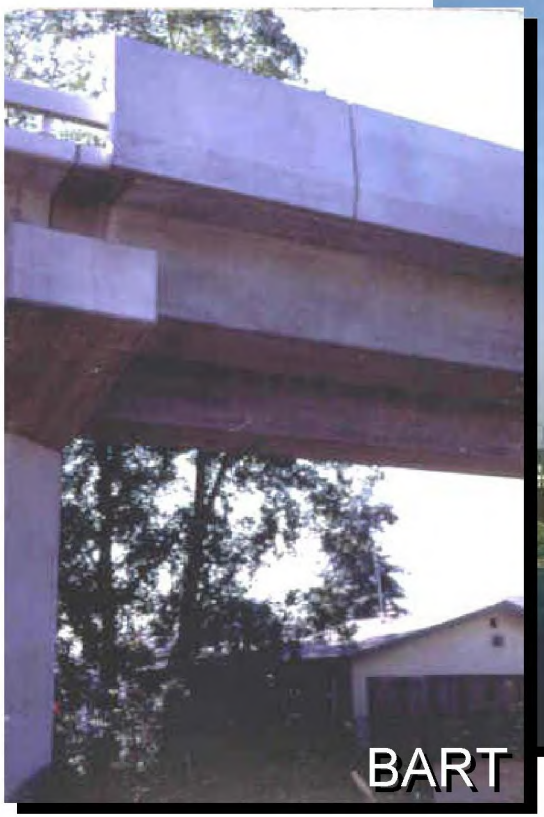
Segmental Girders

JFK Airport

Environmental Mitigation

- Landscaping
- Noise Barriers

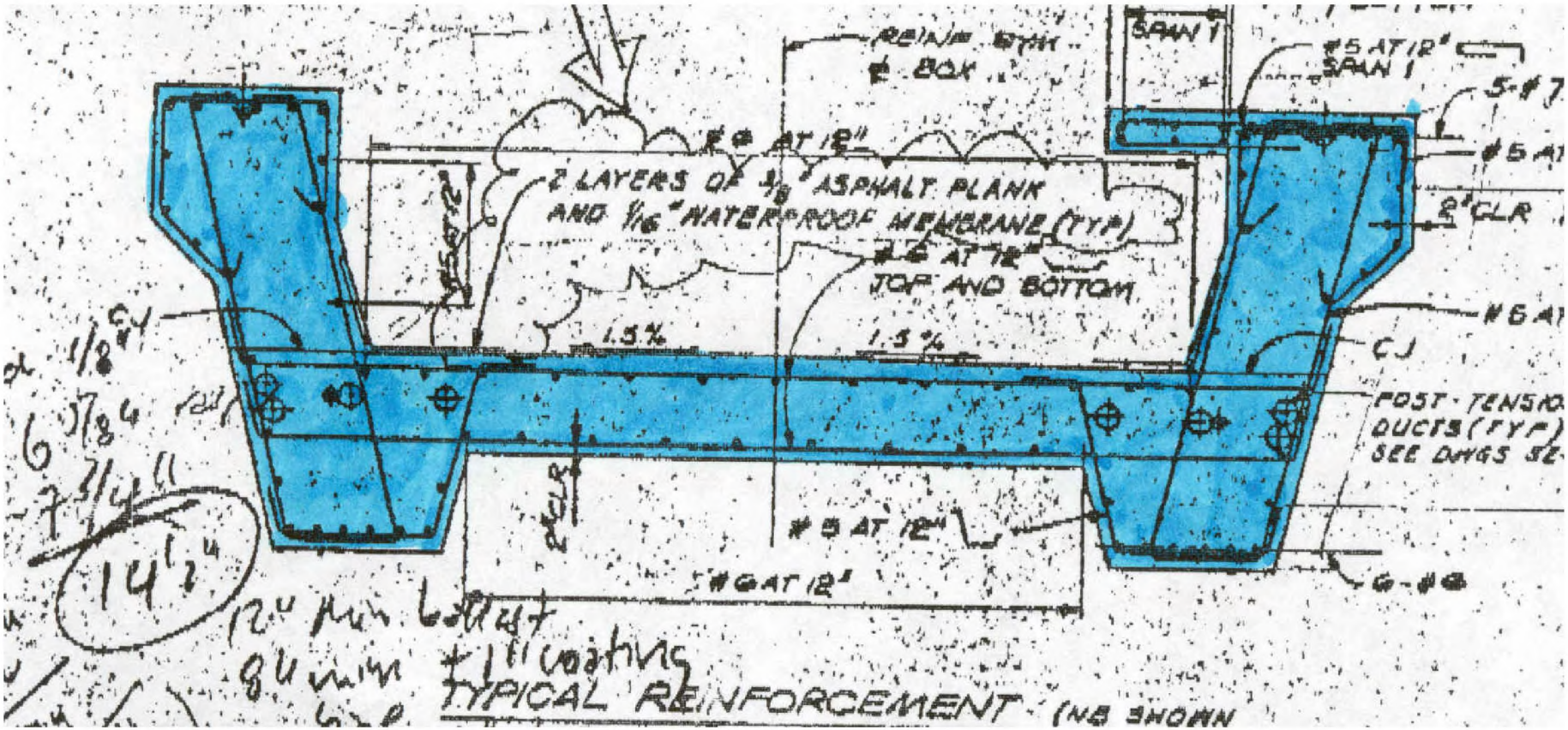
Noise Barriers


BART


BART

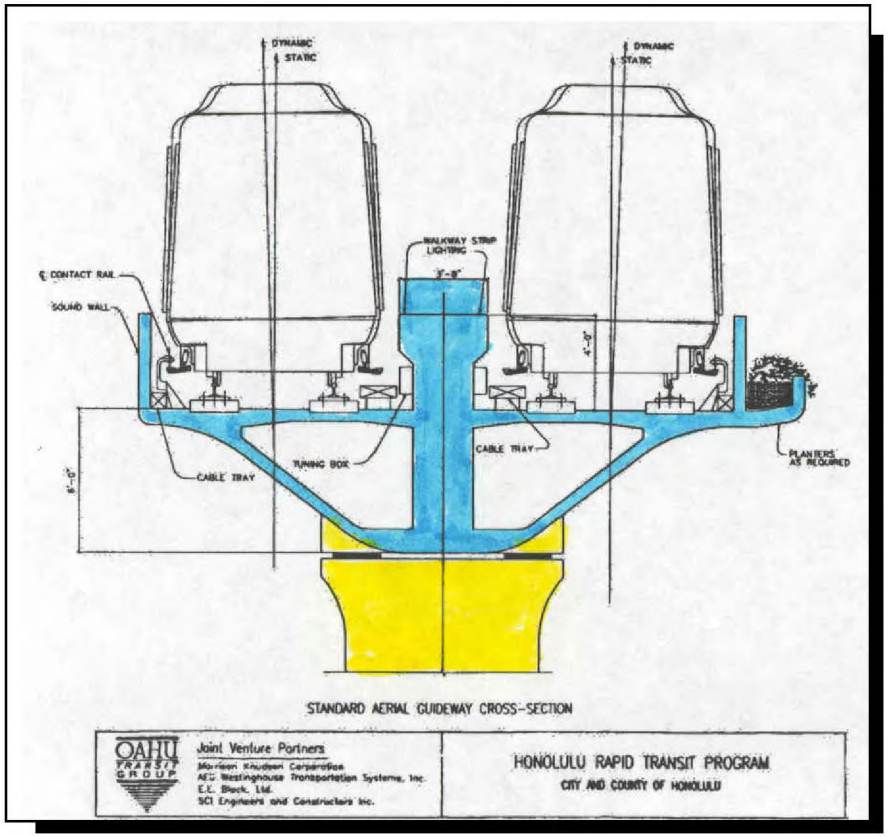

JFK Airport

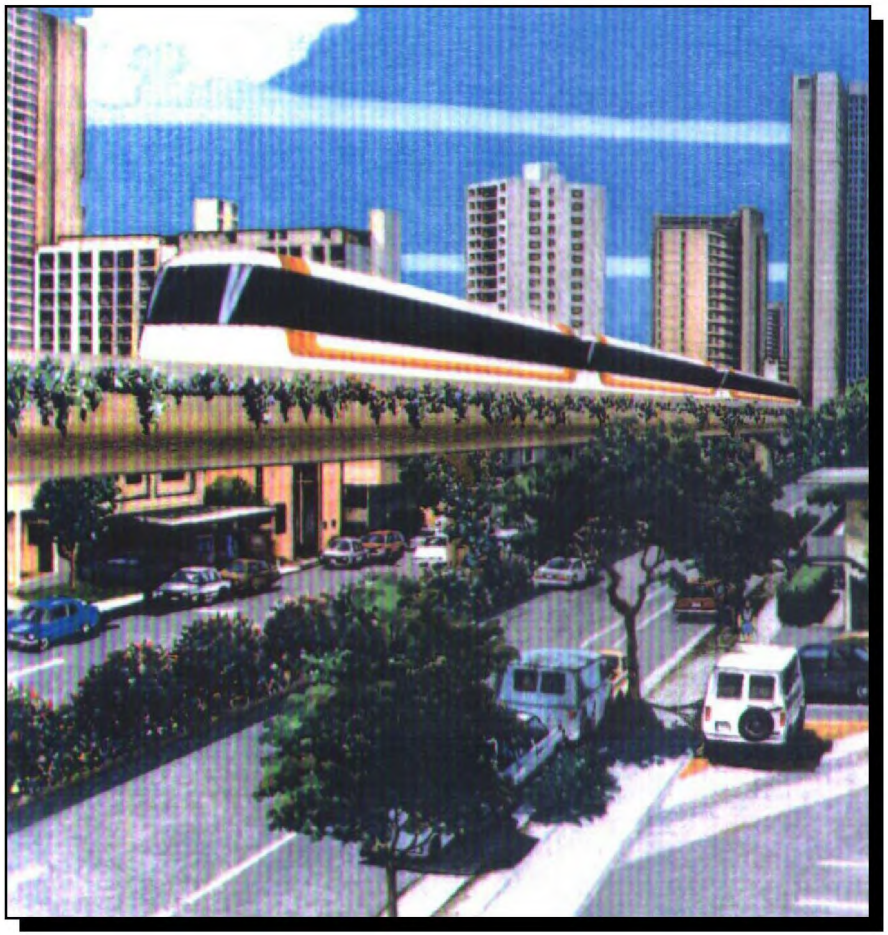
Other Shapes



Los Angeles

Honolulu 1992 Plan





Monterrey Tub Girder

Technology Selection Update

- Transportation Committee OK—Nov 29
- Request for Information Issue—Dec 5
- 11 Supplier Responses Received—Jan 22
- Full City Council OK—Jan 23
- Panel Members Selected—Feb 1
- First Panel Meeting—Feb 15
- Final Panel Meeting—Feb 22
- Report to Transportation Committee—Feb 28

Post Selection Actions

- Transportation Committee—Feb 28
  - Report from Panel
  - Public Comment
- Full Council Meeting—Mar 19
  - Public Comment
- Transportation Committee—Apr 3
  - Supplier Presentations
  - Public Comment
- Full Council Meeting—April 16
  - Public Comment

Technologies Evaluated

- Steel wheel on steel rail
- Rubber tire on concrete
- Magnetic levitation
- Monorail

  – Resolution 07-376 created the Independent Technology Selection Panel to evaluate the four technologies

Technology Selection

Steel Wheel on Steel Rail

ALSTOM

Ansaldo-Breda

Siemens

Bombardier

Mitsubishi-Sumitomo

Technology Selection

Rubber Tire on Concrete

APTS - Phileas

Siemens

Translohr

Maglev

Mitsubishi-Itochu

Monorail

Hitachi America

Appointed Panel

- Five member panel
  - Two members chosen by Mayor
  - One member chosen by Council Chair
  - One member chosen by Chair of Committee on Transportation & Pubic Works
  - Fifth member selected by other panel members
  - Fifth panel member also panel Chair

Panel Requirements

- Technical Panel Members should have direct experience with at least two different technologies
- One Panel Member should be a systems expert
- One Panel Member should be a civil/ construction expert
- One Panel Member should be an operations expert
- The non-technical Panel Member should be a public policy expert

Conflict of Interest Affidavit

- Panel Members Affirmed:
  - They are not employed by suppliers or consultants with any ongoing project interest
  - They have no financial interest in any supplier or consultant with ongoing project interest
  - They and their employer agree not to bid on any future project work for at least 3 years
  - They have not made any political contributions in Hawaii in the past 5 years
  - They have no other conflicts of interest
  - They will provide fair and impartial advice

Panel Members

- Steve Barsony
  - Systems engineer
  - Selected by Transportation Committee Chair
- Ken Knight
  - Construction expert
  - Chosen by Mayor
- Henry Kolesar
  - Operations expert
  - Chosen by Mayor
- Panos Prevedouros
  - Transportation engineer/ UH Mānoa professor
  - Chosen by Council Chair
- Ron Tober
  - Panel Chair selected by other panelists
  - General Manager & CEO of several rail transit operating systems

Panel Process

- First panel meeting
  - February 15, 2008 – Mission Memorial Hall
  - Public Comment
- Next week
  - Read and analyzed RFI materials
  - Panelists sequestered
  - Created individual reports
- Final panel meeting
  - February 22, 2008 – Mission Memorial Hall
  - Public Comment

Technology Selection Process

- **Panel Recommendation**
  - **Recommended steel wheel on steel rail on February 22, 2008**
  - **Panel vote was 4-1**

Steel wheel on steel rail	Rubber tire on concrete
• Steve Barsony	• Panos Prevedouros
• Ken Knight	
• Henry Kolesar	
• Ron Tober	

Individual Panel Member Comments

Panel Report Highlights

- **Steve Barsony (steel wheel/steel rail)**
  - Most mature transit technology
  - Most widely used and available transit technology
    - Expected to provide the best competition in procurement
  - High reliability without compromising City's requirement
  - Best potential for vehicle and system interchangeability

Panel Report Highlights

- **Ken Knight (steel wheel/steel rail)**
  - System reliability
  - Operational safety
  - High-speed service capability
  - Non-proprietary systems

Panel Report Highlights

- **Henry Kolesar (steel wheel/steel rail)**
  - Minimal risk, mature technology
  - Highest level of initial competition
  - Highest level of future competition

Panel Report Highlights

- **Panos Prevedouros (rubber tire on concrete)**
  - Traffic congestion with rail will be worse than today
  - Rubber tire technology offers comparable or superior capacity
  - Rubber tire technology has better acceleration, deceleration, turning ability, climbing ability
  - Unlike simplicity of HOV lanes - rail is:
    - Complex electromagnetic system
    - Foreign technology
    - Magnet for crime and drugs
  - Past advocates for rail have had "change of heart"

Panel Report Highlights

- **Ron Tober (steel wheel/steel rail)**
  - First major transit system – long term investment that must be successful
  - Greatest base of suppliers (good competition and long term support)
  - Superior operational performance characteristics
  - Better overall cost profile (long term operations and maintenance costs)
  - Minimal risks associated with implementation and service delivery